

# United States Marine Corps Concepts & Programs 2002









# ***Table of Contents***

<b>CMC INTRODUCTION</b>	iv
<b>CHAPTER 1 - EXPEDITIONARY BY CULTURE - TRANSFORMATIONAL BY DESIGN. TRANSFORMING THE UNITED STATES MARINE CORPS</b>	1
<b>CHAPTER 2 - EXPEDITIONARY MANEUVER WARFARE MARINE CORPS CAPSTONE CONCEPT</b>	11
<b>CHAPTER 3 - MAJOR ACQUISITION PROGRAMS</b>	29
<b><u>Part 1 - Command Element</u></b>	30
Joint Network Management System (JNMS)	30
Unit Operations Center (UOC)	32
Coastal Battlefield Reconnaissance And Analysis (COBRA)	34
Global Command And Control System (GCCS)	36
Global Command and Control Systems-13 (GCCS-13) Initiatives	37
Joint Tactical Radio System (JTRS)	39
Sorbent Decontamination System (SDS)	41
Joint Biological Point Detector System (JBPDS)	42
NBC Joint Warning and Reporting Network (JWARN)	43
Joint Service Lightweight Nuclear, Biological, Chemical Reconnaissance System (JSLNBCRS)	44
Joint Simulation System (JSIMS)	45
Marine Expeditionary Unit/Non-Lethal Weapon (NLW) Capability Set	46
Tactical Data Network (TDN)	48
Global Broadcast Service (GBS)	49
<b><u>Part 2 - Ground Combat Element</u></b>	50
Advanced Amphibious Assault Vehicle (AAAV) Program	50
Small Unit Riverine Craft (SURC)	52
Light Armored Vehicle Service Life Extension Program (LAV SLEP)	53
Amphibious Assault Vehicle (AAV) Reliability, Availability, Maintainability/Rebuild to Standard (AAV RAM/RS) Program	54
Integrated Infantry Combat System (IICS)	56



Lightweight 155mm (LW155) Howitzer	57
Predator/Short Range Antitank Weapon (Predator/SRAW)	59
Modular Weapon System (MWS)	61
M1A1 Firepower Enhancements Program (FEP)	62
High Mobility Artillery Rocket System (HIMARS)	63
Target Location, Designation and Hand-Off System (TLDHS)	65
Advanced Anti-Tank Weapon System - Heavy (AAWS-H)	66
Advanced Field Artillery Tactical Data System (AFATDS)	67
Assault Breaching Vehicle (ABV)	68

### **Part 3 - Aviation Combat Element**

MV-22 Osprey	69
H-1 Upgrade (UH-1Y/AH-1Z) Program	71
KC-130J	72
Short Take-Off Vertical Landing (STOVL) Joint Strike Fighter (JSF)	73
AV-8B Harrier Warfighting Enhancements	75
F/A-18A/B/C/D Hornet Upgrade	77
Litening II Targeting Pod	78
Common Aviation Command and Control System (CAC2S)	79
Multi-Role Radar System (MRRS)	81
Tactical Air Operations Center (TAOC)	82
Air Surveillance and Precision Approach and Radar Control System (ASPARCS)	83
Complementary Low Altitude Weapon System (CLAWS)	84
Pedestal Mounted Stinger (Avenger)	85
Stinger Missile System Block I Upgrade	86
Three Dimensional Long Range Radar (AN/TPS-59(V)3)	87
Composite Tracking Network (CTN)	88

### **Part 4 - Combat Service Support Element**

Logistics Vehicle System Replacement (LVSR)	89
High Mobility Multipurpose Wheeled Vehicle A2 (HMMWVA2) Series	91
Medium Tactical Vehicle Replacement (MTVR)	92
Aviation Refueling Capability (ARC)	93
Extended Boom Forklift (EBFL)	94
Family of Containers	95



<b><u>Part 5 - Supporting Establishment</u></b>	97
Multiple Integrated Laser Engagement System 2000 (MILES 2000)	97
Distance Learning (DL) Program	99
Indoor Simulated Marksmanship Trainer-Enhanced (ISMT-E)	100
Combined Arms Command and Control Training Upgrade System (CACCTUS)	101
<b>Appendix A - Acronyms</b>	102





## ***A MESSAGE FROM THE COMMANDANT OF THE MARINE CORPS***



As a force in readiness, the Marine Corps, in close partnership with the Navy, is proud of its contributions to America's forward presence and expeditionary power projection capabilities. We have long recognized that our continued success depends on our willingness and ability to prepare for, and adapt to, the ever-changing national security environment. Accordingly, as the Marine Corps is Naval by nature

and expeditionary in character, it is also transformational by design.

The Navy-Marine Corps Team has progressed from wooden ships of sail with embarked Marines to forward deployed, sea-based Naval expeditionary forces capable of operating across the full spectrum of combat. Indeed, the Marine Corps has a legacy of innovation as seen in our development of counter-insurgency tactics, close air support, amphibious warfare, vertical envelopment, STOVL aircraft technology, maritime pre-positioning, ship-to-objective maneuver, and integrated anti-terrorism capabilities.

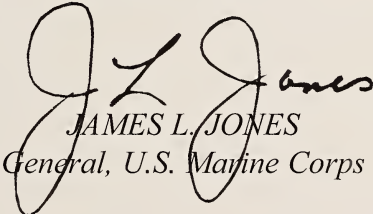
Drawing on this heritage of transformation, the Marine Corps is continuing to move forward aggressively today in order to achieve new capabilities for our Nation to project power and influence from



the sea. We are focused on harnessing advanced technologies, new operational concepts, organizational realignments, and better business practices to give our Marine Air Ground Task Forces leap-ahead advantages and supremacy on the battlefields of tomorrow.

Concepts and Programs 2002 addresses these matters and much more. The following pages provide a review of the Corps' ongoing transformation, our capstone concept Expeditionary Maneuver Warfare, and a discussion of the Corps' major acquisition programs. In sum, for those who wish to better understand the Corps, our capabilities, and the course we have charted for the future, Concepts and Programs 2002 is an excellent resource.

*Semper Fidelis,*



*JAMES L. JONES*  
*General, U.S. Marine Corps*









**CHAPTER**

**1**

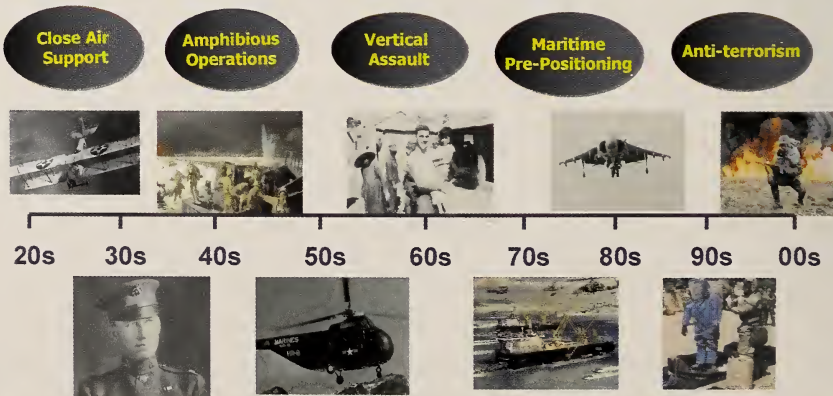
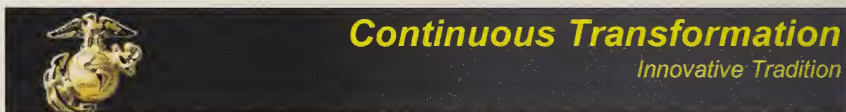
**EXPEDITIONARY  
BY CULTURE  
TRANSFORMATIONAL  
BY DESIGN**



# Chapter 1

## ***Expeditionary by Culture - Transformational by Design Transforming the United States Marine Corps***

When you picked up a publication titled "Concepts and Programs," the last thing you expected was a discussion on transformation. For many organizations in the Department of Defense, it would not make sense to have a discussion of transformation inside a publication so titled. For the United States Marine Corps, transformation is as much what we are as the Eagle, Globe, and Anchor. Marines are expeditionary in the truest sense of the word. While our expeditionary ethos is integral to what we are, our history of continuous innovation and adaptation makes us transformational by design. The Marine Corps has a history of continuous innovation and transformation. From the early days of ships detachments, innovations such as close air support, amphibious warfare, vertical envelopment, Short Take Off and Vertical Landing (STOVL) aircraft technology, maritime pre-positioning, Ship-to-Objective Maneuver, and the establishment of organic Anti-terrorism capabilities, the Marine Corps continues to transform the manner in which our Nation projects power and influence beyond the sea.



***Ready, Relevant, Capable***



Defining transformation is at best challenging, and at worst, simplified to the point of unimportance. Transformation is most easily defined by a combination of what it is, and what it is not. Transformation is not simply the military application of technology. Perhaps one of the most transformational actions in the past 50 years has been the implementation of the all-volunteer force. While not readily appreciated as transformational, the all-volunteer force has fundamentally changed the way we organize, train, and equip today's military. So how is the all-voluntary force "transformation?" Transformation results when change results in one of two outcomes; either an organization develops the ability to do something that was previously unachievable, and/or it develops the ability to perform a function exponentially better than before. The quality of today's military - that "all-volunteer force" - has allowed us to do both. By synthesizing actions across the four pillars of transformation, we can equip the Marine, not simply man the equipment.

Transformation is a synthesis across four "pillars;" leap-ahead technologies, revolutionary operational concepts, organizational change, and the implementation of radical business and acquisition practices. It is important that you understand this definition of transformation, since it is the basis of all Marine Corps programmatic pursuits. Before outlining the specifics of our programs - some leap-ahead technologies, and others simply modernization of existing capabilities - it is important to address each of the pillars of transformation to place these programs in context.

## ***Technologies***

The Marine Corps clearly comprehends the new reality confirmed on 11 September 2001 and understands what it will take to fight and win against current and future challenges to our national security. Our history of continuous innovation has led to investments in major transformational capabilities such as the V-22, STOVL Joint Strike Fighter (JSF), Advanced Amphibious Assault Vehicle (AAAV), and Integrated Logistics Capabilities -all well-developed programs today, and ready to meet the challenges of tomorrow. We know that enhancing our operational and tactical mobility, lethality, stealth and sustainability will serve us well against our future challenges and adversaries. Amphibious lift and maritime prepositioning concepts and capabilities currently in development hold significant promise to revolutionize the future of force deployment and employment, to include contingency response, forcible entry, and force build-up around the globe. Investing today in developing these capabilities is vital to ensuring continued transformation of naval capabilities.

## ***Organizational Transformation***

Organizational transformation is more than squads, platoons, battalions, squadrons, and the various Marine Air Ground Task Forces that make up our operating forces. In addition to our programmatic innovations, the development



of the 4th Marine Expeditionary Brigade (Anti-terrorism) (4th MEB (AT)) consolidates new and existing Marine Corps capabilities into a more effective and readily employable capability to meet the emerging threat of terrorism both at home and around the globe. The establishment of 4th MEB (AT) displays the organizational agility and the adaptability referenced previously. This is not the only aspect of organizational transformation. Organizational transformation encompasses not only how we organize, but also institutionally, how we operate within the organization. Undergirding our entire transformation is our ongoing revolution in the ability to logistically support our operations from home station to the most forward deployed Marine Corps unit. Integrated Logistics Capabilities (ILC) concepts and Activity Based Costing and Management are transforming the way we support warfighters at home and abroad. Organizational transformation is truly "institutional transformation" as it dictates not only how we operate, but as well, how we deal with the close-knit society known as the Marine Corps.

The manner in which we deal with our most valuable resource is an aspect of our institutional transformation. The term "All-volunteer force" is misleading. Today's force is realistically an all-recruited force. Because we must attract the best and brightest America has to offer and retain them once they have earned the title "Marine," we are changing the paradigm within which we respond to Marines' needs. Ours is a young force, with 68% of Marines on their first enlistment.





This youthful force requires us to balance the needs of those in search of a continuous challenge, with our career force's needs of faith, family, and Corps. A Marine and his rifle defined Twentieth Century readiness. Twenty-first Century readiness is defined by a Marine, his family, the weapons systems Marines employ, and the bases and stations they deploy from. While we recruit Marines, we retain families. Bases and stations are central to the quality of life that retains those families. This change in organizational focus is a vital, but often overlooked aspect of Marine Corps transformation.

## ***Business and Acquisition Reform***

Just as it is transforming its organization, the Marine Corps is also transforming its business practices. Our warfighting readiness is a reflection of balancing the demands of current requirements around the globe with the imperative to invest and be prepared for the future. This balance can - over the long haul - be achieved only if resources are reallocated from overhead and support activities to our fighting forces. To accomplish this reallocation of resources, we are adopting better business practices to achieve greater cost-effectiveness. Transformation of business practices is vital to achieving transformed warfighting capabilities and making the most efficient and effective use of resources. The Marine Corps has implemented numerous "best business" practices in making our operations both efficient and effective. We have the largest Activity-Based Costing/Management (ABC/M) program in the Department of Defense, if not in the entire government. Our 15 major bases and stations are fully engaged in ABC/M and have stringent reporting requirements that will help us to fully identify additional areas where we can gain efficiencies. This is vital to our ability to effectively launch expeditionary operations from the fifth element of our Marine Air Ground Task Force, our bases and stations. The Integrated Logistics Capabilities initiative has re-designed Marine Corps ground logistics business processes using information technology as a key enabler. The ILC initiative has provided a structured, disciplined, and focused approach to baselining major Marine Corps logistics processes by exploring opportunities and benefits for moving ahead. ILC has not simply automated old processes, but rather has re-engineered, where appropriate, logistics processes to transform support to the warfighter. Individual initiatives within ILC include: forming a strategic alliance among various Marine Corps business enterprise process owners; centralizing Secondary Repairables management and consolidating echelons of maintenance; consolidating supply functions at the retail level; institutionalizing "best practice tools" for acquisition and material management; developing an integrated, data-sharing logistics information technology architecture and migration strategy; streamlining information technology acquisition processes and procedures; forming an academic-industry strategic alliance for logistics research and services; and standardizing interfaces to facilitate information sharing between systems applications.



To transform our business practices, the Marine Corps must increasingly rely on business intelligence and associated technologies promoting access to information. We consider information to be a strategic asset, and by assuring access to information, we will improve the operational agility of the Marine Corps. Our efforts to promote enterprise management of information technology confirm our need for a common infrastructure that includes a shared data environment, realignment and consolidation of many of our information systems, and the search for cost-effective strategies.

Commercialization, privatization, and out-sourcing are among the methods the Marine Corps has used to reduce costs, but ultimately it is competition between public and private sources that has led to increased savings. The Marine Corps has initiated competition between government sources and private sector commercial sources for a broad number of activities, best seen in the Marine Corps' application of such competition vis-à-vis its bases and stations. We have embarked on Public-Private Ventures to secure quality housing for all Marines, and when complete, will have eliminated our Housing shortfalls within the timeframe directed by DoD. More importantly, we will have done so without the significant investment in military construction dollars and will have focused Marines on their core competencies. As well, to operate our 15 major installations - essentially providing the range of support services typical of a municipality - a labor force of approximately 20,000 Marines and 14,000 civilians are employed. One of the processes we have used in these competitions to save money is Activity-Based Costing and Management. This process provided our installation commanders information that enabled them to reapply over \$30 million in cost savings last year by analytically measuring the costs of particular work and evaluating the performance of that work.

## ***Revolutionary Concepts***

In the Twentieth Century, mass was the coin of the realm in terms of military power. The shift in the Twenty-first Century has been away from mass to precision and speed. The Marine Corps has continuously developed revolutionary concepts that focus on precision and speed, and when supported by leap-ahead technologies and organizations, will provide new capabilities and order of magnitude improvements in old capabilities. Central to precision and speed is achieving true expeditionary capabilities.

Within the Navy and Marine Corps “expeditionary” means that operations are organically sustainable over extended periods. There is a difference between being expeditionary and simply being deployable. Truly expeditionary forces are those that can not only displace to distant environs and operate immediately upon arrival without host nation support or infrastructure, but also operate over a sustained period of time, without requiring nearly immediate reinforcement. If a force does not have this organic sustainment capability, then it is more ‘deployable’ than ‘expeditionary.’ Organic sustainability will continue



to be the hallmark of truly capable forces around the globe and ongoing improvements in seabasing will be the true transformation of the future. Ongoing advancements in developing future maritime pre-positioning concepts and capabilities are transforming sustainable expeditionary forces of the future. Investing today in developing the next level of capabilities will transform our ability to deliver combat credible forces from the sovereign seabase and move beyond the necessities of host nation ports and airfields for joint force build-up and employment.



## **HOW SEA POWER**



## **BECOMES FIREPOWER**



## **NAVY-MARINE CORPS THE POWER OF TEAMWORK**

Today's actions in the global war on terrorism, as well as the challenges of the future strategic landscape, highlight the continued need for a combat-credible, amphibious, forcible-entry capability and the value of seabasing these capabilities. Naval forces, as an integral component of a larger Joint Force, will use the sea as maneuver space and as a secure "base" from which Joint Force Commanders (JFC) can collect intelligence and project power to impact the early stages of a potential crisis. Enhanced Networked Seabasing provides force protection, C4, fires, and logistic capabilities that support versatile and flexible power projection, and enables highly lethal forces to move directly from ship to objectives deep inland. Enhanced Network Seabasing will network platforms and promote increased interoperability among the Amphibious Task Force, Carrier Battle Group, Maritime Preposition Force, Combat Logistics Force, and emerging high-speed sealift and lighterage technologies. These



enhanced seabased operations will capitalize on rapid force closure through At-Sea Arrival and Assembly, the flexibility of selective equipment offload, rapid force reconstitution, and the protection afforded by the Navy's control of the sea. Seabased operations will capitalize on network centric warfare, the maneuver space afforded by the sea, increased speed of decision making enabled by linked sensors, shooters, and command-and-control nodes. Forward-deployed naval forces will have access to an integrated worldwide logistics system to sustain expeditionary operations.

Properly designed Maritime Pre-positioning Forces (MPF) and adequate Amphibious Lift capacity are key components of seabasing sustainable, expeditionary, forcible-entry operations. Our Nation must maintain the ability to assure access for the protection of American interests, even in the face of the access-denial capabilities of future adversaries. Marines, in conjunction with the Navy, have worked hard to transform expeditionary forcible-entry concepts, and the doctrine, training, and equipment to accomplish the mission with acceptable risks. In addition to V-22, STOVL JSF, and AAV, particular attention has been paid to key capabilities that enable the forcible-entry mission: Mine Counter-Measures (MCM), Littoral Anti-Submarine Warfare, Naval Surface Fire Support (NSFS), and Amphibious Lift. Investing in the platforms and systems associated with these capabilities (such as the next generation of amphibious ships and MCM platforms, the joint command and control ship, naval surface fires platforms, and high speed lighterage) - united with naval operational concepts that synergistically combine naval capabilities - will transform expeditionary naval capabilities in the near, mid, and far term.

The ongoing process of conceptual change is embodied in the recent publication of our overarching concept, Expeditionary Maneuver Warfare. It is the foundation for the way the Marine Corps will conduct operations in the Twenty-first Century. Expeditionary Maneuver Warfare is the union of our core competencies, maneuver warfare philosophy, expeditionary heritage, and the concepts by which we organize, deploy, and employ forces. It emphasizes the unique and proven capabilities the Marine Corps provides Joint Force Commanders and the synergy created when leveraged with the complementary capabilities of other Services and agencies. These capabilities translate into power projection designed to promote global security and reassure our allies and friends, while deterring and defeating adversaries and potential foes. The next Chapter will provide a more detailed look at Expeditionary Maneuver Warfare (EMW).











**CHAPTER**

**2**

**EXPEDITIONARY  
MANEUVER  
WARFARE**

**MARINE CORPS  
CAPSTONE CONCEPT**





## Chapter 2

### *Expeditionary Maneuver Warfare*

#### *Marine Corps Capstone Concept*

Expeditionary Maneuver Warfare is the Marine Corps' capstone concept for the early 21st century. It is built on our core competencies and prepares the Marine Corps, as a "total force," to meet the challenges and opportunities of a rapidly changing world. Capitalizing on our maneuver warfare philosophy and expeditionary heritage, the concept contains the enduring

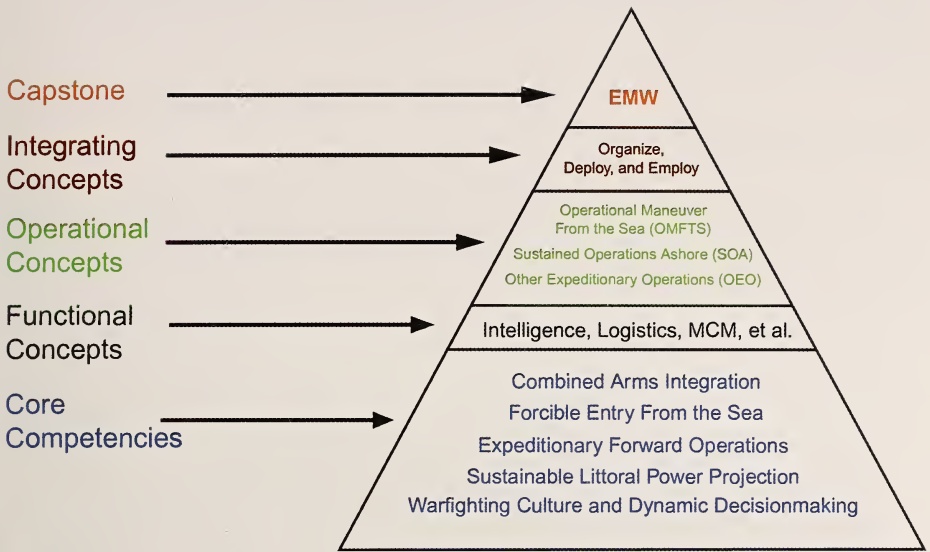


characteristics and evolving capabilities, upon which the Marine Corps will rely, to promote peace and stability and mitigate or resolve crises as part of a joint force. EMW focuses Marine Corps competencies, evolving capabilities, and innovative concepts to ensure that we provide the joint force commander (JFC) with forces optimized for forward presence, engagement, crisis response, antiterrorism, and warfighting. The purpose of this document is to articulate to future JFCs and contemporary joint concept developers the Marine Corps' contribution to future joint operations. EMW serves as the basis for influencing the Joint Concept Development and Experimentation Process and the Marine Corps Expeditionary Force Development System. It further refines the broad axis of advance identified in *Marine Corps Strategy 21* for future capability enhancements.

#### *Joint and Multi-national Enabling*

Marine forces possess the capabilities to provide the means or opportunity to make joint and multinational operations possible. Enabling operations may be as basic as establishing the initial command and control (C2) system that the assembling joint or multinational force "plugs into," or as complex as physically seizing forward operating bases for follow-on forces. Other examples of enabling operations include defeating enemy antiaccess capabilities and serving as an operational maneuver element to exploit joint force success or open new fronts. Marine forces are ready to serve as the lead elements of a joint force,





act as joint enablers, and/or serve as joint task force (JTF) or functional component commanders (i.e., Joint Force Land Component Commander, Joint Force Air Component Commander, Joint Force Maritime Component Commander).

## ***Strategic Agility***

Marine forces will rapidly transition from precrisis state to full operational capability in a distant theater. This requires uniformly ready forces, sustainable and easily task-organized for multiple missions or functions. They must be agile, lethal, swift to deploy, and always prepared to move to the scene of an emergency or conflict.

## ***Operational Reach***

Marine forces will project and sustain relevant and effective power across the depth of the battlespace.

## ***Tactical Flexibility***

Marine forces will conduct multiple, concurrent, dissimilar missions, rapidly transitioning from one task to the next, providing multidimensional capabilities (air, land, and sea) to the joint team. For example, tactical flexibility allows the same forward-deployed Marine force to evacuate noncombatants from troubled



areas, conduct antiterrorism/force protection operations, and seize critical infrastructure to enable follow-on forces.

## ***Support and Sustainment***

Marine forces will provide focused logistics to enable power projection independent of host nation support against distant objectives across the breadth and depth of a theater of operations.



These capabilities enhance the joint force's ability to reassure and encourage our friends and allies while we deter, mitigate, or resolve crises through speed, stealth, and precision.

## ***Strategic Landscape***

United States' interests will continue to be challenged by an array of national and nonstate actors posing conventional and asymmetrical threats. These threats are made more complex and lethal by the increased availability of militarily-applicable commercial technologies. As the technological gap between the United States and its potential adversaries narrows, our leadership, doctrine, and training will be fundamental to maintaining our continued military advantage. We expect potential adversaries to adapt their tactics, weaponry, and antiaccess strategies to confront us on terms of relative advantage. Specifically, adversaries will seek to engage us where they perceive us to be weak. Aware of our ability to degrade complex systems, the thinking adversary will opt for the use of sophisticated but autonomous weapons. Knowing our thirst for information, they will promote uncertainty, confusion, and chaos. This is the venue where our most persistent and determined adversaries will choose to operate. Our Nation must be prepared to fight—worldwide—against adversaries who will seek to engage us with asymmetric capabilities rooted deep in the human dimension of conflict. The Marine Corps, with our philosophy



of maneuver warfare and heritage of expeditionary operations, is ideally suited to succeed in this challenging landscape.

## ***Expeditionary Advantage***

The Marine Corps' expeditionary advantage is derived from combining our maneuver warfare philosophy; expeditionary culture; and the manner in which we organize, deploy, and employ our forces. EMW capitalizes on this combination, providing the JFC with a total force in readiness that is prepared to operate with other Services and multinational forces in the full range of military operations from peacetime engagement to major theater war.

## ***Maneuver Warfare***

The Marine Corps approach to warfare, as codified in Marine Corps Doctrinal Publication (MCDP) 1, *Warfighting*, is the product of years of conceptual development, innovation, and experience. Maneuver warfare, the philosophical basis for EMW, acknowledges the timeless realities of human conflict and does not attempt to redefine war on more humane or less risky terms. The fundamental nature of war—a violent struggle between hostile, independent, irreconcilable wills characterized by chaos, friction, and uncertainty—will remain unchanged as it transcends advancements in technology. What has changed is the gradual shift in reliance from the quantitative characteristics of warfare—mass and volume—to a realization that qualitative factors (speed, stealth, precision, and sustainability) have become increasingly important facets of modern warfare. Maneuver warfare stresses proactive thought and action, elevating the operational art beyond the crude simplicity of attrition. It combines high tempo operations with a bias for action to achieve advantage—physical, temporal, or conditional—relative to an adversary. The aim is to shatter an adversary's cohesion, succeed in other operations by rapid action to mitigate damage, or resolve a crisis on favorable terms. Maneuver warfare encourages decentralized decision making, enabling Marines to exploit the chaotic nature of combat. Decentralizing decision making allows Marines to compress the decision cycle, seize fleeting opportunity, and engage enemy forces from positions of advantage, which empowers us to outthink, outmaneuver, and outfight our adversary.

## ***Expeditionary Operations***

For Marines, the term expeditionary connotes more than the mere capability to deploy overseas when needed. Expeditionary is our ethos; a pervasive mindset that influences all aspects of organizing, training, and equipping by acknowledging the necessity to adapt to the conditions mandated by the battlespace. Expeditionary operations are typically conducted in austere



environments, from sea, land or forward bases. They will likely require Marines and other naval forces to be brought to bear without reliance on host nation or outside support. As a tangible representation of our national interest, forward-deployed and forward-based Marines remain both a key element of America's expeditionary advantage and are critical to the regional combatant commander's or commander in chief's (CINC's) overall strategy.

The regional CINC will set the broad conditions for shaping the battlespace through engagement, forward presence, and the application of a full range of response options. As a critical component of each regional CINC's Theater Engagement Plan, forward-deployed Marine air-ground task forces (MAGTFs) and forward-based Marines execute multinational training exercises, conduct mobile training teams, and participate in military-to-military exchanges. Through these activities, Marines develop invaluable regional expertise, cultural and situational awareness, and an appreciation of the interoperability required for successful joint and multinational operations.



Marine forces, as a part of the regional CINC's engagement strategy, will focus on access operations or other assigned missions as a part of the right mix of joint/multinational forces. These operations may be as basic as establishing the initial C2 system that the assembling joint or multinational force "plugs into" or as complex as physically seizing forward operating bases for follow-on forces. Throughout the conduct of operations, Marines will seek to leverage the unique and complementary capabilities of other Services and agencies in order to provide the JFC with a fully integrated force.

## ***Seabasing***

Marine forces, as an integral component of a larger naval force, will be prepared to influence events within the world's littorals using the sea as maneuver space and as a secure "base" from which JFCs can project power to impact the early stages of a potential crisis. Seabasing supports versatile and flexible power projection. Seabasing enables forces to move directly from ship to objectives deep inland and represents a significant advance from traditional,





phased amphibious operations. Seabased operations maximize naval power projection and enhance the deployment and employment of naval expeditionary forces by JFCs. More than a family of platforms afloat, seabasing will network platforms and promote interoperability among the amphibious task force, carrier battle group, maritime pre-

position force, combat logistics force, and emerging high-speed sealift and lighterage technologies. Seabased operations will capitalize on the maneuver space afforded by the sea, rapid force closure through at-sea arrival and assembly, and the protection assured by the U.S. Navy's control of the sea. C2, combat support, and combat service support capabilities will remain at sea to the maximum extent possible and be focused upon supporting expeditionary air and land operations ashore. Forward-deployed naval forces will have access to a responsive worldwide logistic system to sustain expeditionary operations. Seabasing will allow Marine forces to commence sustainable operations, enable the flow of follow-on forces into theater, and expedite the reconstitution and redeployment of Marine forces for follow-on missions.

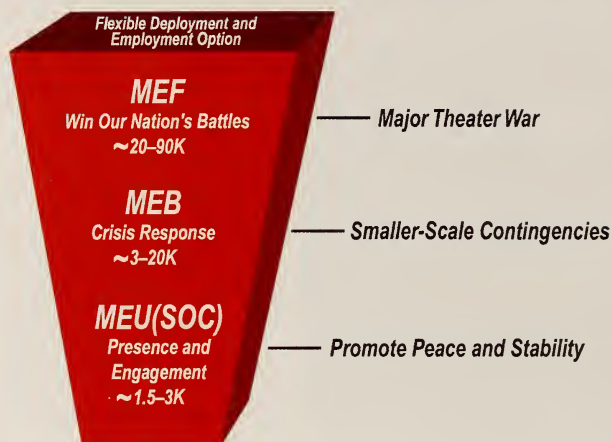
### ***Marine Air-Ground Task Forces***

Marines typically deploy and employ as scalable, tailorable, combined-arms teams known as MAGTFs. All MAGTFs, regardless of size, share four common organizational elements that vary in size and composition according to the mission: command element (CE), ground combat element (GCE), aviation combat element (ACE), and combat service support element (CSSE). Organic to each MAGTF, regardless of size, are specialized antiterrorism and force protection capabilities that are available to support the JFC. Fully interoperable, each MAGTF will have the ability to serve as a JTF headquarters or as a functional or Service component commander of a JTF.

In partnership with the Navy, Marine forces will use the capabilities of bases and stations and selected naval platforms as "launch pads" to flow into theater. During deployment, Marine forces will conduct collaborative planning and execute en route mission training and virtual rehearsals. They will capitalize on shared situational awareness that is developed in support of the JFC and



# MAGTF Scalability



processed and distributed by the supporting establishment. These enhancements will revolutionize the otherwise time-intensive reception, staging, onward movement, and integration (RSOI) activities, allowing increased operational tempo and seizing early opportunities as the enabling force for the JFC. Forward-deployed Navy and Marine forces will continue to be the JFC's optimal enabling

force, prepared to open ports and airfields and to establish expeditionary airfields and intermediate staging bases in either benign or hostile environments.

## ***Marine Expeditionary Unit (Special Operations Capable)***

The Marine Expeditionary Unit (Special Operations Capable) (MEU(SOC)), in close partnership with the Navy, will continue to be the on-scene/on-call enabler for follow-on Marine or joint forces. Operating forward-deployed from the sea, the MEU(SOC) is unconstrained by regional infrastructure requirements or restrictions imposed by other nations. Because of its forward presence, situational awareness, rapid response planning capability, and organic





sustainment, the MEU(SOC) will continue to be the JFC's immediately employable combined-arms force of choice.

The MEU(SOC) initiates humanitarian assistance, provides force protection, conducts noncombatant evacuations, enables JTF C2, and facilitates the introduction of follow-on forces conducting limited forcible entry operations when required. These early actions shape the JFC's battlespace, deter potential aggressors, defuse volatile situations, minimize the damage caused by natural disasters, and alleviate human suffering. Increasing mobility, speed, firepower, and tactical lift will enable this seabased, self-sustained, combined-arms force to conduct expeditionary operations across the depth of the battlespace, in adverse conditions, day or night.

### ***Marine Expeditionary Brigade***

The Marine Expeditionary Brigade (MEB) is optimally scaled and task-organized to respond to a full range of crises. Strategically deployed via a variety of modes (amphibious shipping and strategic airlift and sealift) and poised for sustainable power projection, the MEB will continue to provide a



robust seabased forcible entry capability. It will use organic combined-arms and the complementary capabilities from the other Services—such as netted sensors, seabased fires, and advanced mine countermeasures—to locate, counter, or penetrate vulnerable seams in an

adversary's access denial systems. The MEB will then close rapidly on critical objectives via air, land, and sea to achieve decisive results. It can be used to enable the introduction of follow-on forces (joint and multinational) or be employed as an independent operational maneuver element in support of the JFC's campaign plan. The MEB constitutes a multidimensional, seabased or landbased, operational "capability in readiness" that can create its own opportunities or exploit opportunities resulting from the activities of other components of the joint force.



## ***Marine Expeditionary Force***

As a crisis escalates, smaller MAGTFs and supporting units are deployed until a Marine Expeditionary Force (MEF) is in place to support the CINC. The MEF, largest of the MAGTFs, is capable of concurrent seabased operations and sustained operations ashore, operating either independently or as part of a joint warfighting team. The MEF can be tailored to meet multiple joint requirements with its inherent sustainability.

## ***Specialized Marine Corps Organizations and Capabilities***

Special purpose MAGTFs are nonstanding organizations temporarily formed to conduct specific missions for which a MEF or other unit is either inappropriate or unavailable. They are organized, trained, and equipped to perform a specific mission such as force protection, humanitarian assistance, disaster relief, peacetime engagement activities, or regionally focused exercises. While the MAGTF construct will remain the primary warfighting organization of the Marine Corps, not all situations will require it to operate as a combined-arms unit. Should the situation warrant, distinct MAGTF elements and capabilities may be employed separately in response to critical JFC requirements.

For example, the 4th MEB (AT) is a unique organization with specialized antiterrorism capabilities. This unit consists of Marines and Sailors specifically trained to respond rapidly—worldwide—to threats or actual attacks by terrorists. The 4th MEB (AT) contains the Marine Corps Security Force Battalion (fleet antiterrorism security teams), the Marine Security Guard Battalion, the Chemical Biological Incident Response Force, and an infantry battalion specially trained in antiterrorism operations.

## ***Supporting Establishment***

Marine Corps bases and stations provide direct and indirect support to the MAGTF and other forward-deployed forces and are the means by which Marine forces are formed, trained, and maintained. These bases and stations are platforms from which Marines project expeditionary power while supporting the quality of life of Marines and their families.

## ***The Way Ahead***

*Marine Corps Strategy 21* identifies capability enhancements required to continue the evolution of the MAGTF. These capability enhancements include joint/multinational enabling, strategic agility, operational reach, tactical flexibility, and support and sustainment, which create a Marine force that provides the JFC with expanded power in order to assure friends and allies or dissuade,



deter, and defeat adversaries. In accordance with our expeditionary culture and warfighting ethos, our doctrine, organization, education, and training must contribute to producing Marines and organizations that thrive in the chaos of conflict by—



- ❑ Producing leaders who have the experience to judge what needs to be done; know how to do it; and exhibit traits of trust, nerve, and restraint.
- ❑ Developing leaders and staffs who function in an environment of ambiguity and uncertainty and make timely and effective decisions under stress.
- ❑ Developing leaders by improving their capacity to recognize patterns, distinguish critical information, and make decisions quickly on an intuitive basis with less than perfect information.
- ❑ Enhancing leaders' decision making skills with investments in education, wargaming/combat simulation activities, and battlespace visualization techniques within a joint or multinational framework.

We will see a convergence of transformation and modernization capabilities in our MAGTFs that will revolutionize expeditionary operations when currently planned programs mature. Realizing EMW's full potential will require a developmental effort focused on improving C2, maneuver, intelligence, integrated fires, logistic, force protection, and information operations. Achieving these improvements will require integration of both Navy and Marine Corps operational concepts, systems, and acquisition strategies.

## ***Organization, Deployment, and Employment***

Changes in operational and functional concepts may necessitate changes in the integrating concepts of organization, deployment, and employment. Organizationally, EMW emphasizes the MEB as the preferred mid-intensity MAGTF and the role of the supporting establishment in direct support of forward operations. Organizational structure must be mission oriented to ensure the effective deployment, employment, sustainment, reconstitution, and redeployment of forces. The Marine supporting establishment must be postured to facilitate situational awareness of worldwide operations, leverage information technologies, and exploit modern logistic concepts in order to anticipate and respond to MAGTF requirements.



Marines will deploy using any combination of enhanced amphibious platforms, strategic sealift and airlift, prepositioned assets, and self-deployment options to rapidly project force throughout the world. By virtue of their en route collaborative planning and virtual rehearsal capability, Marine forces will arrive in theater ready for immediate employment. While Marines achieve great operational synergy when employed as fully integrated MAGTFs, the Marine Corps can provide specific forces and capabilities according to the needs of the JFC. Continuing our tradition of innovation, we must strive to enhance our concepts and technologies to organize, deploy, and employ the force.

## ***Maneuver***

Maneuver in all dimensions—land, air, and, uniquely, operational maneuver from the sea—enables commanders to exploit enemy weakness at the time and place of their choosing through the use of the operational mobility inherent in naval forces. Maneuver seeks to achieve decisive effects during the conduct of a joint campaign. It is the means of concentrating force at critical points to achieve surprise, psychological shock, and momentum, which drives adversaries into untenable situations. Maneuver can deny the enemy the initiative, reducing his choices to either defending the length and depth of the littorals, thereby dislocating his forces to the JTF's advantage or exposing critical vulnerabilities to exploitation. Enemy forces reacting to MAGTF maneuver generate opportunities for the JFC to concentrate the complementary capabilities of other maneuver forces. Maneuver, integrated with fires, will be linked to and influenced by the JFC's battlespace shaping operations and





directed toward achieving operational effects. Innovative technologies will provide Marines enhanced mobility to cross greater distances and reduce the limitations imposed by terrain, weather, and access denial systems. The result will be an expanded maneuver space, both seaward and inland.

Enhancements in our maneuver capability will compel adversaries to develop innovative antiaccess strategies and systems. Proactive joint efforts to anticipate and counter current and future antiaccess systems will be critical to ensuring freedom of action.

## ***Integrated Fires***

Fires involve more than the mere delivery of ordnance on a target. The psychological impact on an adversary of volume and seemingly random fires cannot be underestimated. The human dimension of conflict entails shattering an enemy's cohesion through the introduction of fear and terror. Marines, applying the tenets of maneuver warfare, will continue to exploit integrated fires and maneuver to shatter the cohesion of an adversary.

We will increasingly leverage seabased and aviation-based fires and develop shore-based fire support systems with improved operational and tactical mobility. Streamlining our fire support coordination procedures and enhancements in combat identification techniques will support rapidly



maneuvering forces while decreasing the risks of fratricide. Forces afloat and ashore require the ability to immediately distinguish friendly forces from others and to then deliver lethal and nonlethal fires with increased range and improved accuracy to achieve the desired effect. Volume and precision of fires are equally important. The continuous availability of high volume, all-weather fires is essential for suppression, obscuration, area denial, and harassment missions. We will use fires to support maneuver just as we use maneuver to exploit the effects of fires.



## ***Intelligence***

Intelligence is a command function that optimizes the quality and speed of decision making. EMW requires a thorough blending of the traditional domains of operations and intelligence. Commanders and their staffs must make decisions in an environment of chaos, uncertainty, and complexity, and they must be prepared to act on incomplete information. The goal of intelligence is to enable the commander to discern the enemy's critical vulnerabilities and exploit them.

Intelligence must support decision making by maintaining current situational awareness, monitoring indications and warnings, identifying potential targets, and assessing the adversary's intent and capabilities at all levels of operations. This requires establishing an intelligence baseline that includes order of battle, geographic factors, and cultural information; all contained in universally accessible databases.

Deployed Marine forces will enhance their organic capabilities by accessing and leveraging national, theater, Service, and multinational intelligence through a comprehensive intelligence surveillance and reconnaissance network. The informed judgment of well-trained, educated, and experienced Marine analysts and collectors will remain the most important intelligence asset.

## ***Logistics***

Marines must access a worldwide infrastructure of distribution systems to support expeditionary operations. The integration of naval expeditionary logistic capabilities with joint information and logistic systems will provide total asset visibility and a common relevant operating picture, effectively linking the operator and logistician across Services and support agencies. Marines must explore ways to reduce the logistic footprint ashore through expeditionary support bases, seabased support, in-stride sustainment, reduction of consumables, improved packaging, better visibility over distribution, and development of alternative ordnance variants that are smaller and lighter, but retain equivalent lethality.

## ***Command and Control***

EMW promotes decentralized execution providing subordinates latitude to accomplish assigned tasks in accordance with the commander's intent. Organic and supporting C2 systems and processes must be adapted to function in any environment, whether afloat, transitioning ashore, or on the move. C2 must facilitate decentralized decision making and enhanced situational awareness at all echelons. Concurrently, C2 must provide the MAGTF commander the ability



to direct joint and multinational task force operations when required.

EMW requires adaptable and intuitive C2 architectures and systems that are fully interoperable with joint and compatible with multinational assets. Expeditionary forces will be able to access, manipulate, and use information in



near real time, developing a common tactical and operational understanding of the battlespace. They will have connectivity to theater and national assets and the ability to disseminate information throughout the force. This will support fully integrated collaborative planning efforts during both deployment and employment.

C2 initiatives must address limitations in the capabilities of all amphibious platforms. Key factors include accelerated technological advances and rapid changes in equipment and capabilities. Flexibility, adaptability, and interoperability are paramount in the design and development of systems and platforms. Particular attention must be made to providing commanders with seamless C2 capabilities throughout the battlespace.

## ***Force Protection***

Force protection are those measures taken to protect a force's fighting potential so that it can be applied at the appropriate time and place. Force protection will rely on the integrated application of a full range of both proactive and reactive capabilities. Multidimensional force protection is achieved through the tailored selection and application of layered active and passive measures





within all domains across the range of military operations—or warfighting functions—with an acceptable level of risk.

We will pursue improvements in the families of technologies and doctrine to enhance force protection capabilities. Marine forces will enhance security programs designed to protect service members, civilian employees, family members, facilities, and equipment in all locations and situations. These enhancements will be accomplished through innovative technological and nontechnology-based solutions combined with planned and integrated application of antiterrorism measures, physical security, operations security, personal protection, and incident response.

## ***Information Operations***

Information operations involve actions taken to affect the adversary's decision making processes and information systems while ensuring the integrity of our own. The integrated components of information operations have always proven applicable across the full range of military operations. Information operations will be used to shape the strategic environment or impart a clearer understanding and perception of a specific mission and its purpose. Information operations will be a force multiplier—reducing the adversary's ability to effectively position and control his forces—and prepare the way for the MAGTF to accomplish future missions. We must leverage information operations and ensure they are synchronized with the JFC's campaign plan to achieve the desired operational effect.

## ***Summary***

EMW describes the Marine Corps' unique contribution to future joint and multinational operations. As the Nation's only seabased, forward-deployed, air-ground force in readiness, Marines stand ready to support the JFC. Marines, intrinsically linked with naval support, maintain the means to rapidly respond to crises and respond with the appropriate level of force. MAGTFs are the JFC's optimized force that will enable the introduction of follow-on forces and prosecute further operations.



EMW focuses our warfighting concepts toward realizing the *Marine Corps Strategy 21* vision of future Marine forces with enhanced expeditionary power projection capabilities. It links our concepts and vision for integration with emerging joint concepts. EMW will guide the process of change to ensure that Marine forces remain ready, relevant, and fully capable of supporting future joint operations.









A grayscale photograph of a desert landscape. In the foreground, the back of a person wearing a light-colored, possibly white, jacket or uniform is visible. They are looking towards a vast desert valley with mountains in the distance. The sky is clear and light-colored. The overall tone is somber and documentary.

**CHAPTER**

**3**

**MAJOR  
ACQUISITION  
PROGRAMS**



## ***Chapter 3***

### ***Major Acquisition Programs***

As described in Chapters 1 and 2, the Marine Corps has a history of innovation that has focused our investments in order to most effectively and efficiently improve warfighting capability across every element of the Marine Air Ground Task Force (MAGTF). This chapter provides a breakdown of major acquisitions as they impact each element of the MAGTF. While some of these programs represent modernization of existing capabilities, several provide truly transformational capabilities to the Marine Corps. When combined with revolutionary operational concepts, organizational change, and radically improved business and acquisition practices, they all directly contribute to a transformed Marine Corps.

#### ***Part 1 - Command Element***

The CE is the MAGTF headquarters, task-organized to provide the command and control capabilities necessary for effective planning, execution and assessment of operations across the warfighting functions. The CE can exercise command and control within a Joint force, and act as a core element around which a Joint Task Force headquarters may be formed. A CE may include additional command and control and intelligence capabilities from national and theater assets.

MAGTF C4I is the overall concept for the migration and integration of tactical data systems, communication systems, and information security systems in the Marine Corps. MAGTF C4I provides commanders with a common tactical picture and the means to manage the increasingly complex modern battlefield. MAGTF C4I provides the ability to send, receive, process, filter, store, and display data to aid in tactical decision making. It also includes systems for advanced warning in future NBC environments. MAGTF C4I employs the same types of common hardware and software whether ashore or afloat or while in garrison or in the field.

#### ***Joint Network Management System (JNMS)***

##### ***Description***

The JNMS is a CINC and Commander, Joint Forces (CJF) joint communications planning and management system. It provides communication planners with the capabilities to conduct high level planning (war planning); detailed planning and engineering; monitoring; control and reconfiguration; spectrum planning and management; and security of systems and networks supporting joint operations.



**Operational Impact**

JNMS will provide the Commander In Chief (CINC), Commander Joint Task Force (CJTF) and Service Component headquarters with an interoperable network planning and management system to establish and operate a Joint Task Force (JTF). The Marine Corps will field JNMS to the active Marine Expeditionary Forces (MEFs) supporting CINC and JTF headquarters, Reserve Forces and Supporting Establishments including the Military Occupational Specialty (MOS) producing schools. The MEFs currently support this mission with an interim and limited JNMS solution.

**Program Status**

JNMS is a Joint Acquisition Category (ACAT) III (IVT) program with Milestone Decision Authority (MDA) at the Army Program Executive Officer, Command, Control, Communications Systems (PEO C3S). The program has a MS I/II decision and contract was awarded in 3rd Qtr FY 01. The Product Manager, Communications Management System (PdM CMS) executes the program with oversight from the Program Manager, Warfighter Information Network - Terrestrial (PM WIN-T). Joint Initial Operating Capability (IOC) is scheduled for 4th Qtr FY03.

<b>Procurement Profile</b>	<b>FY02</b>	<b>FY03</b>
<b>Quantity:</b>	0	0
<b>Developer/Manufacturer</b>	TBD	



## **Unit Operations Center (UOC)**

### **Description**

UOC is comprised of two distinct Operational Requirements Documents (ORD): Combat Operations Center (COC) ORD and the Command Center ORD. Currently, COC is the only funded portion of the UOC requirement.

The COC provides a centralized facility to host C2 functionality for CE, GCE, ACE and CSSE. The COC provides shelter/tent, power, cabling, LAN, and processing systems and will host mission application software. The COC will support C2 information during OMFTS, SOA and OEO and enables the interaction and flow of information between staff members. The COC is scalable to support command echelons BN and above.



### **Operational Impact**

The COC will be deployed as a modular, reconfigurable C2 system. The COC will be able to receive and transmit data and voice communications and will provide the Commander with a Common Tactical Picture (CTP) to support staff planning and analytical and intuitive decision making. The direction and control of unit operations will be exercised primarily through this center.

### **Program Status**

The UOC Program is currently pre-Milestone B. The Combat Operations Center (COC) provides for a mobile and flexible command and control facility on the battlefield and the Command Center (CC) addresses a fixed command and control facility in garrison. The COC requirement is funded in PresBud03. The CCs are currently not funded and are not a candidate for a POM-04 initiative.

In FY 2000, Program Management Operations Center (PMOC) entered into an agreement with the Naval Research Laboratory (NRL) for several prototypes based on the NRL version of the Army Airborne Command and Control (A2C2S) system. In January 2001, NRL completed the first prototype, a COC installed on a HMMWV, and delivered it to PMOC. Subsequently, COCs were also installed in a Large SICPS Shelter (LSS), on two IFV's and on a second HMMWV. From January 2001 to June 2001 these modules were introduced to the MARFOR at Camp Pendleton for several Battalion, Regiment and Division exercises. These exercises put the COC prototypes through the rigors of field operations while simultaneously permitting UOC engineers and specification writers to collect data. The data collected was used to refine the system/subsystem specifications (SSS) in collaboration with industry and to



produce the Request for Proposal (RFP) to industry to design and mass produce this system for the Marine Corps. The anticipated fielding of the COC will begin with Low Rate Initial Production (LRIP) in FY 2003.

<b>Procurement Profile</b>	<b>FY02</b>	<b>FY03</b>
<b>Quantity:</b>	0	32

**Developer/Manufacturer**    Developer: Naval Research Lab (NRL)  
   Manufacturer: TBD



# ***Coastal Battlefield Reconnaissance And Analysis (COBRA)***

## ***Description***

COBRA is a Marine Corps ACAT IV(T) acquisition program with increasing interest by both the Army and Navy. The purpose of the COBRA program is to provide rapid, tactical reconnaissance of the littoral area; a crucial cornerstone for execution of EMW.

The COBRA system consists of two sub-systems with a modular, open architecture design to allow for integration of emerging technologies that prove beneficial. The multispectral imaging (MSI) payload sub-system for airborne data collection is being designed to operate from a manned or Unmanned Aerial Vehicle (UAV) corporate to the Marine Air Ground Task Force (MAGTF). The operator's station sub-system will be used for training, mission planning, exploitation and tailored product dissemination. The exploitation function will incorporate Aided Target Recognition (ATR) algorithms to greatly reduce the workload of image analysts. Early prototypes have already improved the efficiency, speed and quality of intelligence dissemination by Marine Corps UAV Squadron One (VMU-1). Since COBRA will augment several missions, the intelligence products will be tailored to the user and C4 architecture available for dissemination.

C4ISR interoperability is a key concern to ensure rapid, accurate and useful data is provided when and where needed. For mission planning and exploitation COBRA will exploit the capabilities of the Tactical Exploitation System – Navy (TES-N), Tactical Exploitation Group (TEG), Topographic Production Capability (TPC) and Mine Warfare Environmental Decision Aid Library (MEDAL) systems and segments. Products will also flow to these systems as well as the Intelligence Analysis System (IAS) and Intelligence Operator's Workstation (IOW) via the Tactical Data Network (TDN).

## ***Operational Impact***

COBRA will provide the only corporate MAGTF capability to detect and geolocate minefields, obstacles and camouflaged defenses in preparation for the amphibious Ship to Objective Maneuver (STOM) phase of EMW. The information generated by this system is critical for mission planning and execution tools developed for all amphibious landing craft [i.e. AAV, LCAC, and LCU (X)] as well as developmental minefield and obstacle breaching systems. The need for littoral mine detection capability was highlighted by several Flag Officers during the October 2001 Expeditionary Warfare Conference. The advanced technologies employed by COBRA are also well suited to enhance other missions such as Bomb Damage Assessment (BDA), Trafficability Assessment (TA), Search and Rescue (SAR) as well as high resolution mapping both inland (topography) and in water (bathymetry).



**Program Status**

The COBRA ORD received MROC approval on 10 April 2001. The System Design Contract was awarded on 10 August 2001.

<b>Procurement Profile</b>	<b>FY02</b>	<b>FY03</b>
<b>Quantity:</b>	0	0

**Developer/Manufacturer**

- Prime Contractor, Development: Northrop Grumman, Melbourne, FL
- Major Subcontractors: Arete Associates, Niceville, FL  
Science & Engineering Associates,  
San Diego, CA  
Wescam, Healdsburg, CA
- Prime Contractor, Upgrades: Office of Naval Research (ONR)  
Light Cycles, Phoenix, AZ  
Science & Technology International (STI)  
Honolulu, HI  
Veridian Systems, Ann Arbor, MI



# Global Command And Control System (GCCS)

## Description

GCCS is an intermediate step to establishing a Joint Command, Control, Communication, Computing, and Intelligence Surveillance Reconnaissance (C4ISR) system to provide total battlespace information to the warrior. It is a distributed client-server based architecture that incorporates a Common Operating Environment infrastructure with interfaces that support the hosting and execution of heterogeneous applications. Mandated by the JCS, this architecture has been designed, developed, and fielded not as a single system but through periodic accretions of functionality and capability since 1994.

## Operational Impact

As a Joint program, J6V and DISA are the decision-making authorities for GCCS. GCCS enables the Marine Corps participation in Joint warfare planning and execution. The successful employment of GCCS, as a C2 system, has a direct impact upon the mission of the Marine Corps and our ability to participate as a component of the JTF.

## Program Status

During FY 00 Phase I of the GCCS hardware integration was completed. Fielding began in June 00 in accordance with DoD Y2K Systems configuration Management Directive. During Phase I, Systems Command (SYSCOM) and SPAWAR Systems Center Charleston (SSCC) worked with Marine Corps Tactical Systems Support Activity (MCTSSA), the MEFs, and Technical Support of Operating Forces (TSOF) personnel to integrate and field mobile servers and clients used by the MARFORs, MEFs, and MEUs. The new servers and clients will significantly reduce the weight and footprint of the existing equipment.

<i>Procurement Profile</i>	<i>FY02</i>	<i>FY03</i>
<i>Quantity:</i>	123	123

*Developer/Manufacturer* DISA



## ***Global Command and Control Systems-13 (GCCS-13) Initiatives***

### ***Description***

The GCCS-13 is a Joint program that is designed to enhance the operational Commander's intelligence situation awareness through the use of a standard set of integrated, linked tools and services that maximize commonality and interoperability across the tactical, theater, and national communities. The GCCS-13 operates in Joint and Service-specific battlespace and is interoperable, transportable and compliant with the Defense Information Infrastructure Common Operating Environment (DII COE).

### ***Operational Impact***

The operational effectiveness of each program is affected with GCCS-13 changes since GCCS-13 is the baseline software for each program. GCCS-13 allows for the processing, analysis, and dissemination of intelligence between those systems it supports. Therefore, any changes to the software baseline affects the overall operational effectiveness with respect to interoperability and Service unique applications

Each program below, using GCCS-13 as its core software, will benefit in improved operational effectiveness:

- ☐ Technical Control and Analysis Center (TCAC)
- ☐ Topographic Production Capability (TPC)
- ☐ Tactical Exploitation Group (TEG)
- ☐ Counter Intelligence/Human Intelligence (HUMINT) Equipment Program (CIHEP)
- ☐ Tactical Combat Operations (TCO)
- ☐ Tactical Remote Sensor System (TRSS)
- ☐ Joint Surveillance Target Attack Radar System (JSTARS)
- ☐ Coastal Battlefield Reconnaissance and Analysis (COBRA)
- ☐ Tactical Electronic Reconnaissance Processing and Evaluation System (TERPES)
- ☐ Advanced Field Artillery Tactical Data System (AFATDS)

### ***Program Status***

The GCCS-13 Initiative is a new start program entering its first year of funding in FY02. The long-term goal of this program is to achieve an integrated, fully interoperable Marine Corps Intelligence System-of-Systems. The short - term goal is to establish a process and a corresponding set of procedures designed to allow PM Intel to make smart procurement decisions in its efforts toward achieving the long term goal. The GCCS-13 effort is divided into four missions. They are Administration and Facility Infrastructure Support,



Configuration Management (CM), Science and Technology Engineering Support (S&TES), and the Integration Support Team (IST). Each area has a specific mission responsibility with overlapping responsibilities in other areas.

<b><i>Procurement Profile</i></b>	<b><i>FY02</i></b>	<b><i>FY03</i></b>
<b><i>Quantity:</i></b>	0	0
<b><i>Developer/Manufacturer</i></b>	Joint GCCS-13 Program Office	



## **Joint Tactical Radio System (JTRS)**

### **Description**

A software programmable, multi-band, multi-mode radio, JTRS will provide integrated data, video, and voice to support the dissemination of battlespace command and control data, situational awareness, data and voice circuits. JTRS is an integrated solution to support mechanized, mobile, and dismounted forces and will provide embedded networking and information security. Ground Domain variants will provide vehicle, manpack, and hand-held radios.



### **Operational Impact**

Current radio systems provide insufficient data throughput to support exchange of command and control and fire support data. JTRS will provide a wideband networking waveform (WNW) to support the integration of mechanized, motorized and dismounted forces not achievable today. In addition, the multi-band, multi-mode radios will allow for more flexible employment of forces and allow for exchange of information.

Beginning with HF Vehicular Radio Systems that are beyond supportable lifecycle, all legacy tactical radio systems will eventually be replaced (e.g. SINCGARS family of radios, EPLRS, PRC-104 and PRC-138 HF radios.)

### **Program Status**

The Joint Program was reviewed by USD, AT&L on 02 Aug 2001. Approval was given for the JTRS Acquisition Strategy. The JTRS Software Communications Architecture (SCA) and Waveform Acquisitions were designated ACAT 1D to be managed by the JTRS JPO.

The Cluster 1 acquisition for the radio requirements for ground vehicles, including the USAF TACP Modernization vehicles and rotary wing aircraft were designated ACAT 1D to be managed by the US Army's PEO, C3S at Fort Monmouth, NJ.

The JPO was directed to submit a comprehensive JTRS Migration Plan by 15 Oct 01. The JPO was further directed to submit a Strategic Plan to USD (AT&L) by 15 Nov 01. The current moratorium on acquisition of legacy radio systems is reemphasized. Any acquisition or modification of radios, terminals or other communications systems which use over-the-air frequency energy in the frequency range specified in the JTRS ORD must be JTRS compliant unless a waiver is granted by ASD (C3I). Waiver requests must be made through the



appropriate CAE. The JPO will continue to independently recommend approval/disapproval to the ASD (C3I) on each waiver request.

<b>Procurement Profile</b>	<b>FY02</b>	<b>FY03</b>
<b>Quantity:</b>	0	0
<b>Developer/Manufacturer</b>	Boeing Raytheon	



**Sorbent Decontamination System (SDS)**

**Description**

The SDS contains a free flowing, reactive, highly absorptive powder, which will provide vehicle and crew serve weapon operators (50 caliber and larger) the capability to perform operator wipe down (previously referred to as operator spray down) during immediate decontamination operations. SDS will absorb and render harmless liquid chemical agents. The SDS will be contained in an application package carried on tactical vehicles and crew served weapons for use in immediate decontamination. The sorbent decontaminant will absorb liquid agents located on areas of equipment that the operator must come in contact with in order to operate or maintain contaminated equipment. The sorbent is a one-time use item. As soon as the seal on its packet is broken, exposure to the moisture and carbon dioxide in air degrades its reactive properties.

**Operational Impact**

SDS will replace current decontaminants (e.g. the M11, M13 DAP and all DS2 associated with those items.) DS2 must be washed off with water following application, presents environmental and health hazards, and requires special storage and shipping considerations. SDS will eliminate the logistic burden of large amounts of water on the battlefield for this purpose. DS2 presents some undesirable side effects, including the deterioration of rubber and plastic components and generating a slippery surface.

**Program Status**

In FY01 Milestone III was granted. OT was conducted by the Army, however, USMC did not concur with results. Before USMC implementation, USMC plans to have Marine Corps specific testing done by MCOTEA in FY03.

**Procurement Profile**

**Quantity:**

**FY02**

1700

**FY03**

35000

**Development/Manufacturer**

Guild Associates, Inc., Dublin, OH



**Joint Biological Point Detector System (JBPDS)**

**Description**

The suite will consist of complementary detector, collector, and identifier technologies to detect and identify biological threat agents in near real time. The suite will be capable of detecting Biological Warfare (BW) agents in quantities below the amount needed to impact combat effectiveness. The suite will be capable of identifying BW agents in less than 20 minutes.

**Operational Impact**

During Operation Desert Storm, the inability of U.S. forces to effectively defend against BW agents was identified as a major deficiency. Current National Military Strategy specifies a worldwide force protection capability that requires detection, identification, and vaccination in order to protect U.S. forces against potential BW threats.

The JBPDS will meet the Joint Chief's urgent need to enhance the survivability of U.S. forces. It will provide commanders with near-real-time biological agent detection and warning, identification and sample collection capabilities. The primary purpose of the JBPDS will be to limit the effects of biological agent attacks that have the potential for catastrophic effects to U.S. forces at the operational level of war. It may also assist medical personnel in determining effective preventive measures and the appropriate treatment if exposure occurs. Detection and identification of biological agents within the theater of operations will increase the effectiveness of U.S. forces by limiting adverse impacts on operations and logistical systems. The JBPDS will provide the Marine Corps its first capability for point detection and identification of airborne BW agents.

**Program Status**

JPBDS is entering the second phase of LRIP for nine systems (four Man Portable, four Shelter, and one shipboard) that will be used for the Operational Assessment in FY02. Milestone III is anticipated in August 2003, with IOT&E scheduled in FY05.

<b>Procurement Profile</b>	<b>FY02</b>	<b>FY03</b>
<b>Quantity:</b>	0	0
<b>Developer/Manufacturer</b>	Prime Intellitec, DeLand, FL	
	Subcontractor Battelle, Columbus, OH	



# NBC Joint Warning and Reporting Network (JWARN)

## Description

JWARN is a Joint Service ACATIII program. The USMC is the lead Service on this program, which will provide the Services with a comprehensive analysis and response capability to minimize the effects of a hostile NBC attack or accidents/incidents.

## Operational Impact

Without the JWARN Program, units will have to rely on manual systems. JWARN will automate the warfighter's NBC analysis and response capabilities to minimize the effects of a hostile attack or accidents/incidents.

## Program Status

At a Marine Corps Systems Command (MARCORSYSCOM) Commander's Program Review on 7 March 2001 the Director, Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) and the Director, Information Systems (IS) were requested to review the JWARN Joint Operational Requirements Document (JORD) and the JWARN solicitation to ensure that they adequately expressed the Services' requirements. C4ISR and IS were also requested to advise the Commander whether the existing solicitation should be cancelled and a new solicitation issued. On 3 May 2001, responsibility for management of the JWARN program was transferred to C4ISR. C4ISR and IS have completed the requested reviews of the JWARN ORD, solicitation, and acquisition strategy. The JWARN solicitation has been withdrawn. The JWARN ORD and the JWARN Performance Specifications have been validated by Joint Integrated Product Teams (IPTs). JWARN is currently preparing an RFP for release to industry with a Milestone B decision anticipated in 3rd Qtr FY02.

<b>Procurement Profile</b>	<b>FY02</b>	<b>FY03</b>
<b>Quantity:</b>	0	0
<b>Developer/Manufacturer</b>	Block I NBC Analysis BRUHN NewTech, Inc Columbia, MD	
<b>EMD Phase</b>	TBD	



**Joint Service Lightweight Nuclear, Biological, Chemical  
Reconnaissance System (JSLNBCRS)**

**Description**

The JSLNBCRS is an NBC reconnaissance and surveillance system capable of detecting, identifying, collecting and marking nuclear, biological and chemical contamination on the modern day battlefield.

**Operational Impact**

Without the JSLNBCRS, the Marine Corps will continue to maintain and rely on the M93A1 NBC FOX, which has the following deficiencies:

- ☐ Strategic and intratheater lift capabilities are limited due to the vehicle's gross weight (18.3 metric tons) and cube (almost 2,000 cubic feet).
- ☐ Lack of a common platform requires additional support not currently organic to the using unit.
- ☐ Introduction of the JSLNBCRS eliminates/reduces the above deficiencies.

**Program Status**

Program is currently in the System Development and Demonstration (SDD) phase based upon a favorable Milestone B. The contract option for SDD was exercised with the prime contractor (TRW) on 3 July 01 and is currently under development. The program is in the Program Definition & Risk Reduction (PDRR) acquisition phase. Critical Design Review (CDR) took place 17-19 August 1999 and was later approved by the Government on 9 November 1999. Milestone II was approved on 26 June 2001.

<b>Procurement Profile</b>	<b>FY02</b>	<b>FY03</b>
<b>Quantity:</b>	0	0

**Developer/Manufacturer** TRW Incorporated, Carson, CA



# Joint Simulation System (JSIMS)

## Description

JSIMS will provide readily available, operationally valid, computer-simulated environments for use by the CINCs, their components, other Joint organizations, and the Services. JSIMS will provide the capability to jointly educate, train, develop doctrine and tactics, formulate and assess operational plans, assess warfighting situations, define operational requirements, and provide operational input to the acquisition process.

## Operational Impact

Upon fielding, JSIMS will be the premier constructive modeling and simulation system within DoD for conducting Joint and Service level staff training. The Marine Corps plans to replace its current legacy system, the MAGTF Tactical Warfare Simulation with JSIMS. Without JSIMS the CINCs will rely on the current Joint Training Confederation, which is outdated and provides only minimal training

## Program Status

The program is currently in Milestone II. Because it is an evolutionary software development of multiple phases of software builds are underway simultaneously. The program is currently being reevaluated which may impact the current schedule and the system's architecture.

Procurement Profile	FY02	FY03
Quantity:	0	1

Developer/Manufacturer	Titan (R&D developer of USMC portion), San Diego, CA
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## ***Marine Expeditionary Unit/Non-Lethal Weapon (NLW) Capability Set***

### ***Description***

The Non-Lethal Weapon (NLW) Capability Set is a well-rounded, versatile package comprised of Commercial Off-the-Shelf (COTS) and Government Off-the-Shelf (GOTS) non-lethal equipment and munitions. The set enables the Marine Corps to effectively control the non-traditional battlefield within the constraints of the Rules of Engagement (ROE). Non-Lethal Weapons Capability Set (NLWCS) components are explicitly designed and primarily employed to incapacitate personnel or material, while minimizing fatalities or permanent injury to intended targets and collateral damage to property and the environment. NLWCS are most applicable in Military Operations Other Than War (MOOTW). The set's contents can be divided into four distinct categories: personnel protectors; personnel and material effectors; mission enhancers; and training devices. There are 35 items contained in the set, providing body protective equipment, specialty ammunition, sprays and high intensity lights.

### ***Operational Impact***

The NLW Capability Set provides Marines the appropriate weapons, munitions, and equipment to employ a range of non-lethal operations short of deadly force. The addition of NLW Capability Sets to the MEF is intended to augment existing lethal capabilities.

### ***Program Status***

As of Oct 2001, 36 NLW Capability Sets have been fielded. While initial fielding has been completed, older sets are currently undergoing refurbishment to bring them up to the standards set for the USMC.





<b>Procurement Profile</b>	<b>FY02</b>	<b>FY03</b>
<b>Quantity:</b>	<b>0</b>	<b>0</b>

*Note: The set contains numerous components and are replaced or upgrade as needed.*

**Developer/Manufacturer** Initial Integrator Aardvark Tactical Inc.,  
Arcadia, CA



# **Tactical Data Network (TDN)**

## **Description**

The TDN augments the existing MAGTF communications infrastructure to provide the MAGTF commander with an integrated data network, forming the communications backbone for MAGTF tactical data systems and Defense Message System (DMS). The TDN consists of a network of gateways and servers interconnected with one another and their subscribers via a combination of common user long haul transmission systems, local area networks, and switched telephone systems.

## **Operational Impact**

The TDN provides its subscribers with basic data transfer and switching services; access to strategic, supporting establishment, Joint, and other Service component tactical data networks; network management capabilities; and value-added services such as message handling, directory services, file sharing, and terminal emulation support. It will provide IP connectivity for Tactical Data Systems and the DMS.

## **Program Status**

TDN has an evolutionary acquisition strategy. Block I TDN is in the production phase. IOC occurred in 2nd qtr 2002.

<b>Procurement Profile</b>	<b>FY02</b>	<b>FY03</b>
<b>Quantity:</b>	0	0
<b>Developer/Manufacturer</b>	General Dynamics - Communication Systems Taunton, MA	



**Global Broadcast Service (GBS)**

**Description**

The overall GBS system provides near worldwide, high data rate, one-way dissemination of large information products such as classified and unclassified imagery and video, theater message traffic, Joint and Service-unique news, weather and MWR programming to deployed or garrison forces via small user platforms.

**Operational Impact**

GBS will augment other communications systems and provide a continuous high-speed, one-way information flow to deployed, mobile, or garrisoned forces. GBS will support routine operations, training and military exercises, special activities, crises, situational awareness, weapons targeting, reconnaissance, and the transition to and conduct of opposed operations short of nuclear war. Access will be near worldwide, from 65 degrees north latitude to 65 degrees south latitude. It is intended to consistently provide the warfighter with information that allows action inside the decision cycle time of his adversaries.

**Program Status**

This Joint Program is currently in a Pre-Milestone III status. III MEF received two evaluation receive suites (RS) from the Joint Program Office in mid-February 2002 and II MEF is scheduled to receive one evaluation RS in late February 2002. The third stage of developmental/operational testing (DT/OT-3) is planned for May/June 2002. MOT&E is planned for June 2003. The Marine Corps plans to field 50 systems in FY04 and 50 systems in FY05.

<b>Procurement Profile</b>	<b>FY02</b>	<b>FY03</b>
<b>Quantity:</b>	0	0

**Developer/Manufacturer** Raytheon



## **Part 2 - Ground Combat Element**

The GCE is task-organized to conduct ground operations, project combat power and contribute to battlespace dominance in support of the MAGTF's mission. It is formed around an infantry organization reinforced with artillery, reconnaissance, assault amphibian, tank, and engineer forces. The GCE can vary in size and composition from a rifle platoon to one or more Marine divisions. It is the only element that can seize and occupy terrain.

### ***Advanced Amphibious Assault Vehicle (AAAV) Program***

#### ***Description***

The AAAV will join the MV-22 and LCAC as an integral component of the amphibious triad required to execute Expeditionary Maneuver Warfare. The AAAV will allow naval expeditionary forces to eliminate the battlefield mobility gap and, for the first time

in the history of naval warfare, maneuver ashore in a single, seamless stroke giving both the ships and land forces sufficient sea space for maneuver, surprise, and protection. The AAAV's unique combination of offensive firepower, armor, and Nuclear, Biological and Chemical (NBC) protection, and high-



speed mobility on land and sea represent major breakthroughs in the ability of naval expeditionary forces to avoid an enemy's strengths and exploit its weaknesses. The AAAV remains the Marine Corps' number one ground acquisition program.

#### ***Operational Impact***

The AAAV will allow immediate, high-speed surface maneuver of Marine infantry units as they emerge from ships located over the visual horizon 25 nautical miles and beyond. Projection of these forces will be conducted in a manner that exploits the intervening sea and land terrain to achieve surprise and rapidly penetrate weak points in the enemy's littoral defenses to seize operational objectives.

#### ***Program Status***

The first AAAV prototype was publicly presented in June 1999 and the first



prototype began contractor shake out testing in August 1999. During the remainder of 1999 and throughout 2000, three prototypes underwent Developmental Testing and Early Operational Testing with all performance parameters being met. AAAV is currently in the Systems Development and Demonstration Phase of the program, which will see 10 second-generation prototypes produced. Initial Operational Capability (IOC) will be reached in FY 07; Full Operational Capability will be reached in FY 17. A total of 1,013 vehicles will be produced.

<i>Procurement Profile</i>	<i>FY 02</i>	<i>FY 03</i>
<i>Quantity:</i>	0	1
<i>Developer/Manufacturer</i>	General Dynamics Amphibious Systems, Woodbridge, VA	





# **Small Unit Riverine Craft (SURC)**

## **Description**

The SURC will provide tactical mobility and a limited weapons platform for the GCE in a riverine environment. Each craft will move an infantry squad of 13 Marines. It will replace the outdated fleet of Rigid Raiding Craft (RRC), which were not originally designed to operate in a riverine environment. SURC is envisioned to have an inboard engine and its water jet propulsion system will meet the Marine Corps safety requirements.

## **Operational Impact**

The U.S. Marine Corps has a need to conduct raids, reinforcement, reconnaissance and surveillance, deception, show-of-force, security, peacekeeping, counter-drug, and Noncombatant Evacuation operations in a riverine environment. Areas dominated by river networks coincide with population centers around the world. An ability to exploit the river networks, as an avenue of approach, is important. Several characteristics of rivers dictate the use of a shallow draft watercraft. The SURC, escorted by the Riverine Assault Craft, will allow the Marine Corps to conduct operations in this environment. Additionally, the SURC will assist in denying the enemy's use of the river areas. The SURC will replace the RRC which has reached the end of its service life and was not originally purchased for operations in a riverine environment.

## **Program Status**

Completed Milestone A on 9 Jul 97. Phase A activities have focused on market research, technology evaluation, and concept exploration. During FY02, the SURC will go to a combined Milestone B/C, award a contract for an initial order of test craft, and conduct developmental testing. Operational testing will be conducted in FY03. Following successful OT&E and FRP approval, a contract option for production craft will be exercised in FY03.

<b>Procurement Profile</b>	<b>FY02</b>	<b>FY03</b>
<b>Quantity:</b>	0	24

**Developer/Manufacturer** TBD



# Light Armored Vehicle Service Life Extension Program (LAV SLEP)

## Description

LAV SLEP extends the service life of the LAV through 2015. Its goal is to improve the LAV's survivability, sustainability and mobility. It will also improve readiness and reduce fleet and O&S costs.

## Operational Impact

Currently, threat weaponry (e.g. BMP-3) has evolved past the capabilities possessed by the LAV Family of Vehicles (FOV). The SLEP will improve the



survivability of the LAV FOV on the modern battlefield until 2015. The SLEP will enable the Light Armored Reconnaissance Battalion to better perform reconnaissance and security missions, offensive and defensive missions or other operations as the supported Commander may direct. Additionally, the SLEP LAVs supports EMW.

## Program Status

A contract for Engineering Manufacturing of the SLEP upgrades was awarded in March 2000. Five LAV-25 vehicles with SLEP kits integrated were delivered on schedule by Metric in March 2001. Government DT/OT testing of the SLEP vehicles began in April 2001 and ended December 2001. A second contract will be awarded for integration of an Improved Thermal Sight System (ITSS) into the LAV-25. This contract will be awarded as a result of an ongoing full and open competitive acquisition. Milestone C decision is expected in Apr 02.

<b>Procurement Profile</b>	<b>FY02</b>	<b>FY03</b>
<b>Quantity:</b>	316	455
<b>Developer/Manufacturer</b>	Metric Systems, Ft. Walton Beach, FL	



## ***Amphibious Assault Vehicle (AAV) Reliability, Availability, Maintainability/Rebuild to Standard (AAV RAM/RS) Program***

### ***Description***

The AAV RAM/RS Program was approved by the CMC in June 1997. This program establishes a new business relationship between MARCORSYSCOM and MARCORLOGBASES. It is proving to be the model program for reengineering product management and business processes for the USMC within the vision of Total Ownership Costs initiatives. The RAM/RS provides the AAV with a more powerful engine and improvements to the Bradley Fighting Vehicle Suspension to meet or exceed original performance requirements.



### ***Operational Impact***

The RAM/RS program will ensure the AAV remains a viable weapon system until the AAAV is fielded during the period FY07 to FY17.

### ***Program Status***

Due to cost overruns at the MARCORLOGBASES, the plans for FY02 production have been modified to rebuild 85 of the planned 170 vehicles. The current plan for FY02 is to produce 85 vehicles with the remaining 85 to be produced in FY03. For FY02, 60 vehicles will be completed at MCLB Albany and 25 at MCLB Barstow. MCLB Barstow will then shut down the AAV line and shift all FY03 production to MCLB Albany. Additionally, all parts procurements will be renegotiated. This change will result in completion of RAM/RS production in December 2003, vice December 2002. The result is that the Marine Corps will have an AAV line operational at the depot in FY03 that was supposed to go cold after FY02. This will avoid the cost and effort of restarting the line should a decision be made to RAM/RS the remaining 377 AAVs beginning in FY04.



FY01 and FY02 production were to include the production of RAM/RS C7 and R7 variants. Induction of both variants has been delayed, due to ongoing cost issues at MCLB. Induction of C7 vehicles did begin at MCLB Barstow with the induction of the first vehicles in September 2001. Currently, the plan for the R7 vehicles is to delay first inductions until the end of FY02 or the beginning of FY03. This will give PM AAV more time to refine plans on the scope of work for the R7.

<b>Procurement Profile</b>	<b>FY02</b>	<b>FY03</b>
<b>Quantity:</b>	85	85
<b>Developer/Manufacturer</b>	United Defense Limited Partnership (UDLP) VSE Corp AERA Corp Cummins Engine Company	



# *Integrated Infantry Combat System (IICS)*

## *Description*

IICS will meet future requirements for a fully integrated, optimized combat system to improve the lethality, mobility, survivability, sustainability, training, and C2 capabilities of the individual Marine in a Marine Rifle Squad. A successful IICS system will provide a synergistic integration of the subsystems that build a more lethal and survivable Marine combat system.

The integrated subsystems of the IICS include a modular individual weapon capable of mounting thermal sights, Infra Red aiming device as well as other lethality enhancements. It will be a helmet mounted system that include image fusion, C2 interfaces, and battlefield eye protection. Advanced load carrying capability, integrated chemical biological protective garments and communications connectivity from the squad level to the MAGTF translate into a more lethal, mobile, survivable Marine.

## *Operational Impact*

IICS will provide the individual Marine infantryman greater lethality, survivability, mobility, C2 and sustainability by exploiting emerging technology and integrating various modular subsystem capabilities into a cohesive combat system. The result will be a more lethal, mobile, and survivable infantry Marine capable of fighting and winning in all expeditionary environments.

## *Program Status*

The IICS Program is currently in the Concept Exploration phase of its development. The program is focused on developing requirement documents and its acquisition strategy. The IICS Capstone Requirements Document is currently in staffing at MCCDC and signature is expected in FY02. The IICS ongoing Front End-Analysis (FEA) was completed in the 1st Qtr FY02. This FEA provides the program with a set of squad level capabilities, how those capabilities relate to equipment, and measures of effectiveness/performance for those capabilities. Additionally, Battelle Corp. has completed a series of IICS specific vignettes based on approved USMC scenarios developed for the AAV program. These will provide the operational context for the development of analytical tools used to assist in identifying optimal equipment suits (currently in development) for our infantry. Lastly, Simulation Technologies, Inc. is developing an IICS modeling and simulation tool using the Integrated Unit Simulation System (IUSS) model to deliver an 18 Hour Vignette Model to be used for follow-on IICS evaluation and analysis support.

<i>Procurement Profile</i>	<i>FY02</i>	<i>FY03</i>
<i>Quantity:</i>	0	0

*Developer/Manufacturer* TBD



## ***Lightweight 155mm (LW155) Howitzer***

### ***Description***

The LW155 is the world's first 155mm howitzer weighing under 9,000 pounds. It offers greater ground mobility and improved reaction times, compared to the M198 Howitzer it is designed to replace.

### ***Operational Impact***

The LW155 towed howitzer system (defined as howitzer, prime mover, and associated equipment) will meet increased operational thresholds in lethality, survivability, mobility, deployability, and sustainability required to support maneuver warfare. The system's operational tempo must be enhanced, ensuring that greater firepower is achieved while the system's vulnerability is reduced. To provide the supported force with overmatching fire support, a weapon system that shoots more, moves more, is more agile, responsive, reliable, and lighter is necessary.



### ***Program Status***

The program was restructured after a decision briefing was provided to the ASN (RDA) on 9 October 2001. The restructure will provide production weapons for use in Operational Test. The program will now incorporate a limited production decision in September 2002 for a total of 94 systems spread over two years and a follow-on Milestone III full-rate production decision upon completion of First Article Testing, Production Qualification Testing, and the Operational Test.



<b>Procurement Profile</b>	<b>FY02</b>	<b>FY03</b>
<b>Quantity:</b>	0	34
<b>Developer/Manufacturer</b>	Prime contractor BAE SYSTEMS Barrow in Furness, UK. Subcontractors United Defense, Hattiesburg MS Major Tool and Machine, Indianapolis, IN Wegmann, USA, Lynchburg, VA Hydro-Mill, Chatsworth, CA RTI, Niles, OH Rock Island Arsenal, Rock Island, IL Howmet, Whitehall, MI PCC, Portland, OR PCT, Portland, OR Rotek, Florence, KY Watervliet Arsenal, Watervliet, NY	



## ***Predator/Short Range Antitank Weapon (Predator/SRAW)***

### ***Description***

The Predator/SRAW is a one-man portable, fire-and-forget, disposable, top-attack, short range (17-600m) antitank weapon capable of defeating current and future Main Battle Tanks equipped with Explosive Reactive Armor (ERA).

### ***Operational Impact***

The Predator/SRAW will provide the infantry battalion with the organic capability to engage and destroy ERA-equipped Main Battle Tanks at ranges between 17 and 600 meters. Its soft-launch and fire-and-forget features will significantly enhance both gunner survivability and the ability of the battalion to conduct anti-armor operations in urban terrain. It will provide greater range and lethality than both the AT-4 and SMAW (HEAA).

### ***Program Status***

The Predator/SRAW program is in the final stages of the Engineering and Manufacturing Development (EMD) phase of the acquisition cycle. All Developmental Testing was completed during the 2nd Qtr FY00. Initial Operational Test and Evaluation (IOT&E) was completed during the 3rd Qtr, FY00. On 18 Dec 2000, an LRIP decision brief was presented to the Milestone Decision Authority (MDA). The MDA directed that the Corrective Action Verification Test Flights (Feb, Jun, Sep 2001) be conducted as planned. These flights have all been successfully completed. A production decision was granted 1st Qtr FY02.





**Procurement Profile**  
**Quantity:**

**FY02**  
0

**FY03**  
445

***Developer/Manufacturer***

*Principal Development Activity:* Naval Surface Warfare Center-Dahlgren Division

Prime Contractor  
Lockheed Martin Missiles and Fire Control  
Division, Orlando, FL

Major Sub-contractors:  
Aerojet, Sacramento, CA/Socorro, NM  
Alliant Technology, Rocket City, WV  
Syston Donner, Concord, CA  
Primex, Marion, IL



# Modular Weapon System (MWS)

## Description

The MWS is a modification to the M4 and M16A2 service rifles. The system consists of an upper receiver modified with a MIL-STD-1913 rail adapter system. The rail adapter system and modified handguards allow for the mounting of various accessories such as a modified M203 launching system, high intensity flashlights, and IR laser target designators.



## Operational Impact

Use of the MWS will significantly improve the ability to mount various accessories and will improve the accuracy, target detection, day or night engagement and maintainability of the M16 family of rifles.

## Program Status

Congressional plus up provided \$1M for procurement during FY99, \$16M for FY03, and \$5M for FY04.

### Procurement Profile

Quantity:

**FY02**

1567

**FY03**

17391

### Developer/Manufacturer

Colt's Manufacturing Company, Inc.  
Hartford, CT



**M1A1 Firepower Enhancements Program (FEP)**

**Description**

The FEP is a suite of upgrades for the M1A1 Tank. It will include a second-generation thermal sight and a far target location (FTL) capability. The second-generation thermal sight consists of upgrades to the M1A1 stabilization system, infrared optics, an infrared focal plane array, associated analog and digital electronics, display, brackets, and cables. The FTL system consists of a North Finding Module (NFM), bracket, cables, and inputs from the existing laser rangefinder and Precision Lightweight Global Positioning System Receiver (PLGR). The FTL system will provide the tank crew with accurate target location within two seconds after lasing the target. The FTL solution is determined by utilizing the inputs of the laser rangefinder, PLGR, and NFM.



**Operational Impact**

As a MAGTF asset, the M1A1 Tank provides maneuver and armor protected firepower to the GCE. As the mobility and survivability of threat systems improve, the M1A1 must increase the speed and accuracy with which they acquire and engage targets. The M1A1 FEP system will provide thermal imaging and FTL capability, which will overmatch threat sensor performance thereby improving the ability of USMC tank crews to engage and defeat an enemy at extended ranges. The M1A1 FEP system will provide for increased target detection, recognition, identification, and FTL capabilities during day and night operations, through smoke, fog, or other battlefield obscurants.

**Program Status**

On 22 February 2000, COMMARCORSYSCOM approved the program for entry into Phase 1, the Competitive Integration and Demonstration (CIDP) phase. In July 2000 competitive contracts were awarded to develop prototype systems for evaluation. At the end of CIDP, the program will down select to a single contractor.

**Procurement Profile**  
**Quantity:**

**FY02**  
0

**FY03**  
0

**Developer/Manufacturer**

Raytheon Systems Company  
McKinney, TX  
DRS Sensor Systems, Inc.  
Torrence, CA



## ***High Mobility Artillery Rocket System (HIMARS)***

### ***Description***

HIMARS is a C-130 transportable, wheeled, indirect fire weapon system capable of firing rockets / missiles in the Multiple Launch Rocket System Family of Munitions (MFOM). HIMARS extends the range of available fire support from 30KM to 60KM and provides a 2,300% increase in the area coverage for engaged warfighting forces.



### ***Operational Impact***

HIMARS addresses an identified, critical warfighting deficiency in USMC fire support and provides 24 hour ground-based, responsive General Support/General Support Reinforcing/Reinforcing (GS/GSR/R) indirect fires, which accurately engage targets at long range with high volumes of lethal fire.

### ***Program Status***

HIMARS is post-Milestone A for the USMC. With Congressional funding of 17.3 million dollars in FY01, the Marine Corps purchased two prototype launchers, rockets, and parts. Additional procurements include resupply vehicles and trailers, training ammunition, and a training package to support evaluation and test. Significant upcoming initiatives include a Fleet Marine Force evaluation and developmental testing that will ensure that HIMARS addresses current/future fire support requirements.

Current plans are to field two battalions in the 14th Marines with 18 launchers each. The 14th Marines, who have the wartime mission of serving as the Force Artillery Headquarters in support of MEF-level operations are ideally suited to receive this component of the next generation of Marine Artillery.



Officials at Marine Corps Systems Command anticipate production to begin in FY06, with the initial operational capability achieved in FY07.

<i>Procurement Profile</i>	<i>FY02</i>	<i>FY03</i>
<i>Quantity:</i>	0	2

*Developer/Manufacturer* Prime Contractor (HIMARS):  
Lockheed Martin, Dallas, TX

Major Subcontractors  
Steward & Stevenson, Sealy, TX  
O’Gara-Hess, Cincinnati, OH

Prime Contractor (Resupply Vehicles/Trailers)  
Oshkosh Truck Corp, Oshkosh, WI



# Target Location, Designation and Hand-Off System (TLDHS)

## Description

The TLDHS is a man-portable, automated equipment suite that provides Fire Support Observer/Controllers with the ability to accurately acquire, locate, laser designate, then digitally transmit (hand-off) target data to Fire Support platforms and agencies. The TLDHS consists of and integrates two systems: the Lightweight Laser Designator Rangefinder (LLDR) and the Target Hand-off System (THS). The LLDR provides the ability to observe, determine the location of and laser designate ground targets. The THS consists of a tactical laptop computer called the Rugged Handheld Computer (RHC) with Target Hand-off System software. The THS provides capability to compose, edit, send and receive digital messages over tactical combat net radios. The digital messages are used to plan, coordinate and execute fire support missions by field artillery, close air support, and naval surface fire support. When the LLDR and THS are connected via an interconnecting cable there is total TLDHS capability.



## Operational Impact:

TLDHS will increase the accuracy and timeliness of fire support, as well as improving the effects of fires on targets for surface and air-delivered munitions. The risk of fratricide is reduced by providing more accurate observer and target location data. Operator mobility is improved due to the modular system design and the reduced size and weight. Fire support logistics is improved by requiring less ammunition to obtain desired effects on targets.

## Program Status

The LLDR is a Joint Army - USMC program (Army lead). The LLDR is scheduled to begin production in FY02 and the first production LLDRs should begin fielding in FY04. The LLDR and THS will be fielded on separate timelines as soon as each subsystem is ready. The RHCs and the THS are scheduled to be procured FY02 and FY03. The THS should be completely fielded by the end of FY03.

Procurement Profile	FY02	FY03
Quantity:	60	89

Developer/Manufacturer	LLDR: Northrop Grumman Laser Systems, Apopka, FL THS Software: Synetics Corporation, King George, VA
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**Advanced Anti-Tank Weapon System - Heavy (AAWS-H)**

**Description**

The AAWS-H is an upgrade to the Tube-Launched Optically-Tracked, Wire-Guided (TOW) 2 anti-tank weapon system in the ground mount and HMMWV mount version. AAWS-H consists of a new missile launcher and a SLEP program for the TOW 2B plus the addition of a Counter Active Protection System (CAPS).

The AAWS-H missile launcher will be the Improved Target Acquisition System (ITAS). ITAS uses an integrated day/night sight that employs a second generation Forward Looking Infrared Thermal Imager that enables gunners to acquire targets at ranges at least twice that of the current TOW system. ITAS has an eye-safe Laser Range Finder, automatic boresighting, Aided Target Tracker, and embedded training capability. Additionally, it has the capability to fire the missiles in the USMC TOW stockpile and potential for upgrade to launch fire and forget missiles.

In order to ensure the viability of our TOW stockpile, the TOW 2B missiles will undergo SLEP to guarantee an additional 10 years of shelf life and will have a CAPS capability installed to defeat active protection systems on threat armored vehicles.

**Operational Impact**

The AAWS-H System will be organic and provide long range, lethal anti-armor fire to the anti-armor sections in the infantry and tank battalions. In its secondary role, AAWS-H will be employed against vehicles and field fortifications of any type. The ITAS will provide the advantage of increased recognition and detection range, particularly in periods of limited visibility.

**Program Status**

The US Army is currently fielding ITAS. USMC production is expected to begin in FY04 with Initial Operational Capability in FY06. The TOW 2B SLEP program is also expected to begin production in FY04

<b>Procurement Profile:</b>	<b>FY02</b>	<b>FY03</b>
<b>Quantity:</b>	0	0
<b>Developer/Manufacturer</b>	Raytheon Systems, McKinney, TX and Tucson, AZ	



# Advanced Field Artillery Tactical Data System (AFATDS)

## Description

The AFATDS is an automated fire support command and control (C2) system. AFATDS will automate the fire planning, tactical fire direction, and fire support coordination required to support maneuver from the sea and subsequent operations ashore. AFATDS is currently post MSIII and is in the process of fielding across the Marine Corps.

## Operational Impact

AFATDS will be the primary Commanders Fire Support Coordination System employed from MEF to Battery level operations. AFATDS will be used to provide the Commander with the ability to rapidly employ all fire support assets at his disposal. This will allow the flexibility to determine what weapon systems to employ in shaping and dominating the battlespace. AFATDS will greatly enhance the interchange of tactical data between all MAGTF Tactical Command and Control Systems through the use of graphics, common operating applications and communications.

## Program Status

Initial Operational Capability (IOC) was achieved in 3rd Qtr FY00. Fielding is being conducted in three phases. Phase I fields to MEF and Div Fire Support Coordination Centers, DASC, TACC, and RAOC sections, and artillery units with the exception of battery FDC's. Phase II will field artillery battery FDC's as will as incorporate a new software release A99. Phase III will achieve FOC with fielding to maneuver unit Fire Support Coordination Sections. Follow-on software development will continue throughout the system's lifecycle.

## Procurement Profile

Quantity:

FY02

141

FY03

0

## Developer/Manufacturer

Raytheon Systems Company (AFATDS  
Software Developer)  
Fort Wayne, IN

General Dynamics (AFATDS Hardware Contractor)  
Taunton, MA



# Assault Breaching Vehicle (ABV)

## Description

The ABV is a full tracked armored engineer vehicle specifically designed for conducting in-stride breaching of minefields and complex obstacles. The ABV will provide crew protection and vehicle survivability, while having the speed and mobility to keep pace with the maneuver force. Major components of this system include a Full Width Mine Plow (FWMP); Two Line Demolition Charges (LDCs); ground marking system, remote control kit, and weapons station integrated on a modified IPM1 tank chassis. ABV will fill the requirement to clear a lane of sufficient width and depth for the assault forces and will be operated by a two-man crew with an option for remote control.

## Operational Impact

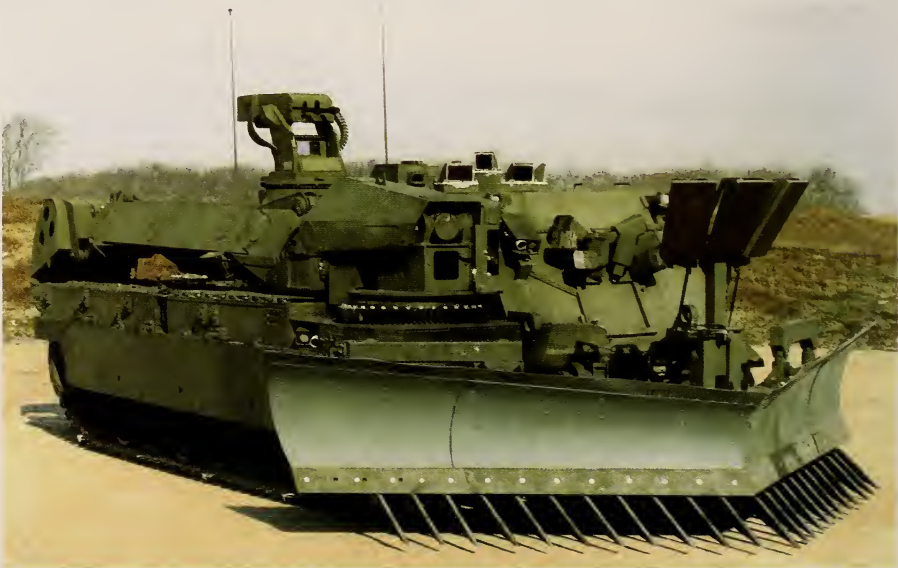
The ABV will improve the mobility and survivability of the MAGTF with deliberate assault breaching capability through minefields and complex obstacles. It will allow assault units to move rapidly through obstacles before threat forces have the full opportunity to mass fires or establish defenses.

## Program Status

MARCORSYSCOM granted Milestone O approval in Feb 2000. Incident to Milestone O approval, the Commander approved \$2.5M to build and test a concept demonstrator to be delivered in July 02.

Procurement Profile	FY02	FY03
Quantity:	1	0

Developer/Manufacturer    Anniston Army Depot (ANAD)





## **Part 3 - Aviation Combat Element**

The ACE is task organized to conduct air operations, project combat power, and contribute to battlespace dominance in support of the MAGTF's mission by performing some or all of the six functions of Marine aviation: antiair warfare, assault support, electronic warfare, offensive air support, air reconnaissance, and control of aircraft and missiles. It is formed around an aviation headquarters with air control agencies, aircraft squadrons or groups, and combat service support units. It can vary in size and composition from an aviation detachment of specifically required aircraft to one or more Marine aircraft wings. The ACE may be employed from ships or forward expeditionary land bases.

### ***MV-22 Osprey***

#### ***Description***

The MV-22 Osprey tiltrotor is a revolutionary, advanced technology vertical/short takeoff and landing (V/STOL), multi-purpose tactical aircraft to replace the current fleet of Vietnam era CH-46E and CH-53D aircraft. The MV-22 will join the AAV and LCAC as an integral part of the amphibious triad necessary to execute EMW. Specific missions include amphibious and land assault, raid operations, medium cargo lift, tactical recovery of aircraft and personnel (TRAP), fleet logistic support, and special warfare. The MV-22's design incorporates the advanced but mature technologies of composite materials, fly-by-wire flight controls, digital cockpits, airfoil design, and manufacturing. The MV-22 Osprey is capable of carrying 24 combat-equipped Marines or a 10,000 pound external load. It also has a strategic self-deployment capability with a 2,100 nautical mile range with single aerial refueling. The MV-22's 38-foot prop-rotor system and engine/transmission nacelle mounted on each wing tip allow it to operate as a helicopter for takeoff and landing. Once airborne, the nacelles rotate forward 90 degrees, converting the MV-22 into a high-speed, high-altitude, fuel-efficient turbo-prop aircraft. The MV-22 is a multi-mission aircraft designed for use by all the Services. The Marine Corps, Navy, and Air Force have committed to fielding, this unique aircraft. Procurement of the MV-22 remains the Marine Corps' number one aviation acquisition priority.

#### ***Operational Impact***

The MV-22 will be the cornerstone of Marine Corps' assault support possessing the speed, endurance, and survivability needed to fight and win on tomorrow's battlefield. This combat multiplier represents a quantum improvement in strategic mobility and tactical flexibility for amphibious and prepositioned maritime forces.



**Program Status**

The experiences of the last year have revealed that considerable work remains to be done in the areas of engineering and design, quality assurance, developmental testing, training, and operational evaluation. The MV-22 program manager has developed a flight test plan that addresses all concerns that have been raised about the MV-22 and prioritizes the fixes necessary for safe operation. This plan includes three consecutive event driven stages. Under this plan, flight-testing should resume in April 2002, using existing prototype aircraft with prototype fixes. This testing would lead to Block A upgrades that would be incorporated into making the MV-22 a safe and operational aircraft for the fleet.

<b>Procurement Profile:</b>	<b>FY02</b>	<b>FY03</b>
<b>Quantity</b>	11	11
<b>Developer/Manufacturer</b>	Bell Helicopter Textron, Fort Worth, TX The Boeing Company, Philadelphia, PA	





# H-1 Upgrade (UH-1Y/AH-1Z) Program

## Description

The H-1 Upgrade (UH-1Y/AH-1Z) program replaces the current two-bladed rotor system on the UH-1N and AH-1W aircraft with a new four-bladed, all-composite rotor system coupled with a sophisticated fully integrated, state-of-the-art cockpit. In addition to the new rotor system and cockpit, the H-1 upgrade will incorporate a new performance-matched transmission, a four-bladed tail rotor and drive system, and upgraded landing gear for both aircraft.

Additionally structural modifications to the AH-1Z will allow the support of increases in six weapons stations. The AH-1Z brings increases in aircraft agility, maximum continuous speed, and payload. The advanced cockpit reduces operator workload, improves situational awareness, and provides growth potential for future weapons and Joint interoperability. It integrates on-board planning, communications, digital fire control, self-contained navigation, night targeting, and weapons systems in mirror-imaged crew stations. The UH-1Y incorporates the identical rotor system and dynamic components, which results in maximum commonality and supportability between the two aircraft. The UH-1Y increases aircraft agility, maximum continuous speed, and payload and restores the required aircraft power margin and provides adequate mission payload and warfighting capability growth potential.

## Operational Impact

The H-1 Upgrade (UH-1Y/AH-1Z) program is designed to reduce life-cycle costs, significantly improve operational capabilities, resolve existing safety deficiencies, and extend the service life of both aircraft. Commonality between aircraft will greatly enhance the maintainability and deployability of the systems with the capability to support and operate both aircraft within the same squadron structure.

## Program Status

The H-1 Upgrade (UH-1Y/AH-1Z) program continues in the EMD Phase. The Critical Design Review was completed in 1998 without major discrepancies. The Marine Corps has delivered four AH-1Ws and three UH-1Ns to Bell Helicopter for modification to support the EMD Phase. The AH-1Z flew its first flight on 7 December 2000. The UH-1Y is scheduled for its first flight during FY01. The total program buy is for 180 AH-1Zs and 100 UH-1Ys for the Marine Corps.

Procurement Profile:	FY02	FY03
Quantity:	0	0
Developer/Manufacturer	Bell Helicopter Textron Inc- Fort Worth, TX Integrated Cockpit - Northrop Grumman- Woodland Hills, CA AH-1Z Target Sight System - Lockheed Martin - Orlando, FL	



KC-130J

Description

The KC-130 is a versatile four-engine, tactical aerial refueler/transport, which supports all six functions of Marine aviation. It is the only long-range fixed wing assault support capability organic to the Marine Corps. The KC-130J with its increase in speed (+21 percent) and range (+35 percent) over legacy aircraft, features an improved air-to-air refueling system and state-of- the-art flight station. The flight station includes two Head Up Displays (HUDs), night vision lighting, augmented crew station and fully integrated digital avionics architecture. An Allison AE 2100D3 propulsion system, with full authority digital electronic controls, Dowty R391 advanced technology six bladed propeller system, and 250 knot cargo ramp and door, complete the package that will provide the MAGTF commander with a state-of-the-art, multi-mission, tactical aerial refueler/transport well into the next century. The Marine Corps intends to replace its aging active fleet of KC-130Fs, Rs, and Ts with the new KC-130J.



Operational Impact

The KC-130 provides both fixed-wing and helicopter tactical in-flight refueling, rapid ground refueling of aircraft or tactical vehicles, assault air transport of air landed or air delivered personnel, supplies and equipment, command and control augmentation, pathfinder, battlefield illumination, tactical aero-medical evacuation, and Tactical Recovery of Aircraft and Personnel (TRAP) support. This force multiplier is well suited to the mission needs of the forward deployed MAGTF. The KC-130J will bring increased capability and mission flexibility to the planning table with its satellite communications system, survivability enhancements, night systems, enhanced rapid ground refueling, and improved aircraft systems.

Program Status

The KC-130J is procured as a commercial-off-the-shelf aircraft currently in production. The total program buy for KC-130J is 79 aircraft for the Marine Corps. DT/OT and an Operational Evaluation will be conducted in FY02 and early FY03 with subsequent delivery to the fleet and Initial Operational Capability by October, 2003.

<b>Procurement Profile:</b>	<b>FY02</b>	<b>FY03</b>
<b>Quantity:</b>	2	4

**Developer/Manufacturer** Lockheed Martin



## ***Short Take-Off Vertical Landing (STOVL) Joint Strike Fighter (JSF)***

### ***Description***

The STOVL JSF will be a single engine, stealthy, supersonic, strike-fighter aircraft capable of short take-offs and vertical landings. It will combine the basing flexibility of the AV-8 with the multi-role capabilities, speed, and maneuverability of the F/A-18 to fulfill both the air-to-ground and air-to-air requirements of the Marine Corps. The aircraft is intended to have a very low RF and IR signature with superior capabilities over the aircraft it will replace (AV-8B, F/A-18A/C/D) in the areas of survivability, lethality, and supportability.



### ***Operational Impact***

The STOVL JSF provides a multi-mission offensive air support and an offensive/defensive anti-air capability. The STOVL JSF also provides the MAGTF with a platform capable of tactical air control and tactical reconnaissance. Additionally, the aircraft will be able to provide suppression of enemy air defenses. The requirements for this aircraft are focused on readiness, expeditionary capability, the combined arms concept, and the conduct of EMW.

### ***Program Status***

The STOVL JSF is a Joint program with the Air Force, Navy, and Marine Corps and includes the United Kingdom. On 26 Oct 2001, a Prime Contractor was selected as the program entered the Systems Development and Demonstration Phase (SDD). In the previous phase, three variants of the JSF were flown: the Conventional Takeoff and Landing (CTOL) to be used by the Air Force; the Carrier Variant (CV) to be used by the Navy; and the Short Takeoff and Vertical Landing (STOVL) variant to be used by the USMC and the





United Kingdom. The Marine Corps anticipates first aircraft delivery in FY08 with IOC of the first JSF squadron in FY10.

<b><i>Procurement Profile:</i></b>	<b><i>FY02</i></b>	<b><i>FY03</i></b>
<b><i>Quantity:</i></b>	0	0

<b><i>Developer/Manufacturer</i></b>	Lockheed Martin/Northrop Grumman/British Aerospace Engineering Pratt & Whitney/General Electric
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## ***AV-8B Harrier Warfighting Enhancements***

### ***Remanufacture Program***

#### ***Description***

The AV-8B Harrier is a single-seat, transonic attack aircraft. Its vertical/short take-off and landing (V/STOL) design gives it the capability to operate from a variety of land and seabased platforms. The current Harrier II (plus) model incorporates an improved engine, night warfighting capabilities, and the APG-65 multi-mode radar. The remanufacture program will upgrade 74 older day-attack aircraft to the current radar/night-attack standard at approximately 80 percent of the cost of a new aircraft. Fifty-four remanufactured Harriers have been delivered as of January 2002.



#### ***Operational Impact***

The MAGTF relies heavily on its organic aviation to offset limited artillery and tank assets and to provide fire support. The V/STOL capability of the AV-8B allows forward basing to facilitate timely close air support and high sortie generation rate to Marine ground forces. The AV-8B can operate from "L" Class ships, conventional aircraft carriers, rapidly constructed expeditionary airfields, forward sites such as roads, and from smaller or damaged conventional airfields. The addition of night-attack and radar capabilities allows the Harrier to be responsive to the needs of the MAGTF at night and in adverse weather.





***Program Status***

The remanufacture of 74 aircraft is programmed through FY03 with the last delivery in July 2003.

<b><i>Procurement Profile:</i></b>	<b><i>FY02</i></b>	<b><i>FY03</i></b>
<b><i>Quantity: (Reman)</i></b>	0	0
<b><i>Developer/Manufacturer</i></b>	Boeing/BAE	



# F/A-18A/B/C/D Hornet Upgrade

## Description

The F/A-18 Hornet is a twin-engine, supersonic, strike-fighter aircraft. It fulfills both the air-to-air and air-to-ground mission requirements and can operate from conventional airfields and aircraft carriers. The F/A-18Cs delivered since FY90 have increased night and marginal weather capability, including a color moving map display, night vision goggle-compatible lighting and a navigation forward-looking infrared



(NAVFLIR) sensor. The two-seat version, F/A-18D, incorporates all warfighting capabilities of the F/A-18C and includes a tactical reconnaissance capability. This aerial reconnaissance capability, Advanced Tactical Air Reconnaissance System (ATARS), provides near real-time aerial imagery to the MAGTF and began deployments with four systems per VMFA (AW) squadron in FY00.

## Operational Impact

The F/A-18C provides modern multi-mission offensive and defensive anti-air capability and offensive air support. The F/A-18D provides the MAGTF with a platform capable of tactical air control and reconnaissance while retaining the capabilities of the F/A-18C. Both aircraft provide powerful and flexible air support and suppression of enemy air defenses. The maintainability and multi-mission capabilities of the F/A-18 make it well suited to the needs of the MAGTF in an austere expeditionary environment.

## Program Status

The Marine Corps has initiated the upgrade of 46 F/A-18As (with a program objective of 76) to Lot XVII F/A-18C aircraft capability as well as digital communications and tactical data link. The Marine Corps anticipates programmed upgrades to enhance the current capabilities of the F/A-18C/D with digital communications, tactical data link, and tactical reconnaissance systems. This ensures that our F/A-18s remain viable and relevant until replaced by the STOVL Joint Strike Fighter (JSF).

<b>Procurement Profile:</b>	<b>FY02</b>	<b>FY03</b>
<b>Quantity:</b>	0	0

**Developer/Manufacturer** The Boeing Company  
Northrop Grumman Hughes



# *Litening II Targeting Pod*

## **Description**

The Litening II precision targeting pod will incorporate the first 3rd generation targeting FLIR in the Naval Aviation inventory. In addition to the advanced FLIR, the enormous capabilities of the Litening include a Laser Spot Tracker, Laser Designator/Rangefinder, Infra-Red Pointer, two charged coupled device (CCD) TV cameras, and an onboard video recording capability for improved Battle Damage Assessment.

## **Operational Impact**

The Litening II will provide a significant operational impact by substantially increasing the lethality and survivability of the AV-8B. The lethality of the AV-8B will be dramatically improved through the superior target detection capabilities provided by Litening II in concert with the latest generation of precision weapons such as JDAM; this combination will increase the efficiency of target prosecution and allow greater aircraft standoff range. As a corollary, these improvements in lethality provide a parallel improvement in survivability by reducing aircraft exposure to the threat. Finally, Litening II fulfills CINC ROE requirements that demand precision targeting in order to minimize collateral damage and further reduce the risk for fratricide. The AV-8B Harrier will provide the Amphibious Ready Group with autonomous precision strike capability and will be a first choice of the CINC for Joint/Combined operations.

## **Program Status**

Initial Operational Capability is scheduled for early 2002 with the 22nd MEU(SOC).

<b>Procurement Profile:</b>	<b>FY02</b>	<b>FY03</b>
<b>Quantity: (Reman)</b>	47	0

**Developer/Manufacturer** Northrop Grumman/Rafael



## ***Common Aviation Command and Control System (CAC2S)***

### ***Description***

The CAC2S is a coordinated modernization effort to replace the existing command and control (C2) equipment of the Marine Air Command and Control System (MACCS) and to provide the ACE with the necessary hardware, software, equipment, and facilities to effectively command, control, and coordinate air operations.

The CAC2S system will accomplish the MACCS missions with a suite of operationally scalable modules capable of supporting any operational contingency. The CAC2S integrates the functions of aviation C2 into an interoperable naval system that will support the core competencies of all Marine Corps warfighting concepts.



### ***Operational Impact***

The CAC2S, in conjunction with MACCS organic sensors and weapons systems, supports the tenets of EMW and fosters a Joint interoperability with other Service C2 systems. It will replace legacy C2 systems in the following Marine aviation C2 elements:



- ☐ Tactical Air Command Center (TACC)
- ☐ Tactical Air Operations Center (TAOC)
- ☐ Direct Air Support Center (DASC)
- ☐ Marine Air Traffic Control Detachment (MATCD)
- ☐ Low Altitude Air Defense Battalion (LAAD BN)

### ***Program Status***

The CAC2S and UOC programs are being developed in parallel to eventually achieve a common MAGTF Operations Center solution. CAC2S is being developed in an evolutionary acquisition strategy in four increments.



Increment I will replace the functionality of the TAOC and will baseline the core information fusion and management function common to all increments and eventually all MAGTF Operation Centers. Increment II will replace the TACC and DASC nodes. Increment III will achieve integration between CAC2S and the Air Surveillance and Precision

Approach Radar Control System (ASPARCS) for Air Traffic Control functionality. Increment IV is the transition to the complete MAGTF Operation Center functionality. CAC2S is an ACAT III program in the program definition and risk reduction development phase. IOC/FOC for Increment I and Increment II is planned for FY06 and FY08, respectively.

<b><i>Procurement Profile:</i></b>	<b><i>FY02</i></b>	<b><i>FY03</i></b>
<b><i>Quantity:</i></b>	0	0

<b><i>Developer/Manufacturer</i></b>	Raytheon Naval and Maritime Integrated Systems
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# Multi-Role Radar System (MRRS)

## Description

The MRRS is a highly mobile radar system to be employed by the MAGTF in all phases of Marine Corps operations. The MRRS is a medium range surveillance radar used to detect and track aircraft, cruise missiles, and unmanned aerial vehicles. The system will serve as a gap-filler radar by providing three-dimensional (3-D) coverage of those areas out of view of the AN/TPS-59 (V) 3, due to terrain masking or other line-of-sight limitations. Additionally, the radar will be capable of providing radar cueing data to all short-range air defense units deployed in support of the MAGTF. The radar is intended to replace and perform all the missions currently associated with the AN/TPS-63 radar, AN/TPS-73 Air Traffic Control radar, and the AN/MPQ-62 surveillance radar. The radar will have connectivity to the Composite Tracking Network and be deployed early during EMW operations to augment seabased air defense sensors and command and control capabilities.

## Operational Impact

The radar will provide the speed and flexibility required for enhanced low-level, low radar cross-section Air Breathing Targets (ABT) detection identification, and tracking in the execution of all EMW operations. Execution and support of these strategies requires the maneuver and control of aircraft, cruise missile, and UAV assets from ships well over-the-horizon direct to objectives, at much greater distances inland than has been historically required. In addition, the radar will be capable of cueing and reporting on targets detected within its coverage limits to designated air command and control agencies. The reduced logistical footprint of the radar will enhance the capabilities of MACCS elements in support of all phases of MAGTF operations. Once ashore, the radar will possess the mobility required to keep pace with supported maneuver elements and will complement the Marine Corps' long-range radar, the AN/TPS-59 (V) 3, by providing accurate low-level tracks.

## Program Status

The MRRS achieved Milestone 0 in August 2000. It is being developed in conjunction with the Office of Naval Research (ONR) as a science and technology effort under the auspices of the Missile Defense Future Naval Capability set. This ONR effort will develop an advanced development model for initial testing in FY04 and full integration testing in FY05. IOC is planned for FY07 with FOC in FY11.

<b>Procurement Profile:</b>	<b>FY02</b>	<b>FY03</b>
<b>Quantity:</b>	0	0
<b>Developer/Manufacturer</b>	TBD	



# Tactical Air Operations Center (TAOC)

## Description

The TAOC is comprised of several weapon systems that are in various stages of their life cycles. The individual systems include the AN/TYQ-23 (V) 4 Tactical Air Operations Module (TAOM), AN/TPS-59 (V) 3, AN/TPS-63 air surveillance radar, AN/MPQ-62 Continuous Wave Acquisition radar, the AN/MSQ-124 Air Defense Communications Platform (ADCP), and the Sector Anti-Air Warfare Facility (SAAWF). The TAOM and ADCP combination provides a robust TADIL capability within a Joint environment. The TAOC provides the equipment and organization necessary to plan, direct, and control tactical air operations and to perform specified airspace management tasks.

## Operational Impact

The TAOM (V) 4 Operator Console Upgrade (OCU) is a reliability centered engineering change that replaces the existing operator console and provides a commercial interface to external networks. The OCU introduces GCCS functionality and windows-based man-to-machine interface. The ADCP has been modified to allow the TAOC to be TADIL J capable at all TAOM systems. Additionally, the ADCP with the TPS-59 radar can track and process TBM tracks and display via TADIL J in a Joint environment.

## Program Status

Fielding of TAOM (V) 4 will complete in FY02.

<b>Procurement Profile:</b>	<b>FY02</b>	<b>FY03</b>
<b>Quantity: TAOM (V) 4</b>	31	0

<b>Developer/Manufacturer</b>	TBD
	AN/TYQ-23 (V) 4 OCU Upgrade - Litton Data Systems



# Air Surveillance and Precision Approach and Radar Control System (ASPARCS)

## Description

The ASPARCS is the next generation expeditionary ATC equipment that will replace legacy expeditionary equipment with HMMWV mounted radars and a CAC2S-based communications and control suite. It will provide an all-weather ATC capability for an expeditionary airfield or forward operating base. The AN/TSQ-216 Remote Landing Site Tower (RLST) is a system currently being fielded to provide a fully expeditionary HMMWV mounted control tower.

## Operational Impact

The ASPARCS will provide a HMMWV mounted state-of-the-art ATC surveillance and precision approach radar system that significantly reduces tactical and strategic lift requirements. The system will be fully interoperable with other CAC2S applications, utilize common hardware and software, and be capable of functioning as an ACE C2 node. The AN/TSQ-216 RLST will provide a fully functional two-position control tower complemented by a robust communications capability. These two programs provide a dynamic expeditionary ATC capability able to be deployed in a package of two C-130 equivalents.

## Program Status

The ASPARCS program will begin developmental testing in FY02, IOC is planned for FY04 and FOC in FY09. The RLST will field 12 systems in FY02.

<i>Procurement Profile:</i>	<i>FY02</i>	<i>FY03</i>
<i>Quantity: ASPARCS</i>	0	0
<i>RLST</i>	12	0

<i>Developer/Manufacturer</i>	ASPARCS-Lockheed Martin
	RLST-Sierra Nevada Corporation



# Complementary Low Altitude Weapon System (CLAWS)

## Description

CLAWS will provide a rapidly deployable, mobile, high firepower, all-weather, standoff air defense system to defend Marine Expeditionary Forces and Naval Forces from attack by cruise missiles, fixed-wing and rotary-wing aircraft, and UAVs. It shall complement existing Stinger-based short-range air defense (SHORAD) capabilities and will interface with current and proposed MACCS and Amphibious Task Force (ATF) sensors and data paths. CLAWS consists of a minimum of four Advanced Medium Range Air-to-Air Missiles (AMRAAM) mounted on a Heavy High Mobility Multi-Wheel Vehicle (HMMWV), missile interface equipment, remote terminal unit(s), a geographical location positioning system, a Global Positioning System (GPS) receiver, SINCGARS radio(s), and an organic reloading device.

## Operational Impact

Stinger/Avenger systems provide effective close-in low altitude air defense against threat aircraft. However, effective range is limited and they lack the capability to provide reliable air defense against the emerging threat posed by the proliferation of cruise missiles. CLAWS provides the speed and flexibility required for the execution of Operational Maneuver From the Sea (OMFTS). It will possess the mobility/lethality required to keep pace with supported maneuver elements to fill gaps in Naval Air Defense coverage created by extended littoral operations. It will complement Stinger/Avenger systems by prosecuting enemy cruise missiles and other air breathing targets beyond the capabilities/ranges of these systems.

## Program Status

The Program Office received a Milestone B decision for CLAWS on 27 March 2001 and is subsequently proceeding with System Development and Demonstration activities. CLAWS has been assigned an Acquisition Category (ACAT) III designation. The Program Office awarded a System Development and Demonstration contract on 6 April 2001.

<b>Procurement Profile</b>	<b>FY02</b>	<b>FY03</b>
<b>Quantity:</b>	0	0
<b>Developer/Manufacturer</b>	Raytheon Electronics Systems Bedford, MA	



# Pedestal Mounted Stinger (Avenger)

## Description

The Avenger system provides the MAGTF with a highly mobile Air Defense platform that employs the Stinger missile against close in, low altitude, fixed and rotary wing aircraft throughout the theater of operations. The Avenger is a High Mobility Multi-Wheeled Vehicle (HMMWV) based platform capable of near simultaneous firing of 8-guided air defense Stinger Missiles via the Standard Vehicle Mounted Launcher and an electronic .50 caliber machinegun. The Avenger employs a gyro-stabilized turret, which allows the operator to shoot both missiles and .50 caliber machinegun on the move and is additionally equipped with Identification Friend or Foe (IFF), Forward Looking Infrared (FLIR), and a laser range finder. The Avenger will have upgrades, including the final procurement of the Avenger Fire Control Computer (AFCC), which replaces the obsolete Avenger Control Electronics, as well as initial replacement of the FLIR/Slip ring.



## Operational Impact

The Avenger employs the only Air Defense Weapon in the forward area. It supports the maneuver style of warfare of the MAGTF providing defense against high speed, close in, low altitude, fixed and rotary wing aircraft throughout the theater of operations. However, the magnitude of the threat has proliferated to the point that most developed countries are developing more advanced systems. The Avenger enhancements allow the MAGTF to fully capitalize on the upgrades to the Block I configuration Stinger Missile and provide increased defense against low-aspect angle targets, reactive infrared countermeasures, night engagements, and engaging targets in clutter.

## Program Status

The Avenger is a fully fielded system with upgrades fielding in early FY02 and completing in late FY04.

<i>Procurement Profile</i>	<i>FY02</i>	<i>FY03</i>
<i>AFCC Quantity:</i>	31	0
<i>FLIR/Slip Ring Quantity:</i>	0	75

*Developer/Manufacturer* Raytheon Corporation



# Stinger Missile System Block I Upgrade

## Description

Stinger Missile platforms provide defense against low altitude fixed and rotary wing aircraft. The Stinger Missile is a heat seeking air defense guided missile capable of man-portable shoulder launch or vehicle launch. It employs a unique image scanning technique that allows it to discriminate among targets, flares, and background clutter. The Stinger Missile also possesses the Target Adaptive Guidance technique that biases missile orientation toward vulnerable portions of the aircraft and assures maximized lethality. This superior lethality is derived from hit-to-kill accuracy, high warhead lethality, and the impact force of the Stinger Missile's kinetic energy generated by speeds of up to Mach 2.0. The fire-and-forget technology allows gunners and platforms to take cover or engage new targets immediately after firing. The Stinger Missile is issued as a certified round of ammunition, so it requires no field maintenance or associated logistical costs. The upgrade consists of a new generation Reprogrammable Micro Processor (RMP), software enhancement and a roll frequency sensor.

## Operational Impact

The capabilities of the existing stockpile of RMP needs to be increased to meet these threats by modernization through technology insertion. The upgrade (to the Block I configuration) will eliminate several shortcomings of the RMP missile that include capabilities against low-aspect angle targets, reactive infrared countermeasures, night engagements, and engaging targets in clutter. This upgrade has increased the acquisition range of the missile (out beyond 10 kilometers) and has proven to be more effective against UAVs and low radar cross-section targets.

## Program Status

Stinger Missile Block I upgrades will continue through FY02 and will be completed in FY06.

<b>Procurement Profile</b>	<b>FY02</b>	<b>FY03</b>
<b>Quantity:</b>	150	343
<b>Developer/Manufacturer</b>	Raytheon Missile Systems Corporation	



## Three Dimensional Long Range Radar (AN/TPS-59(V)3)

### Description

The AN/TPS-59(V)3 Radar System is a lightweight, transportable, long-range, solid state, 3-D L-Band radar. The radar can be integrated as an automatic surveillance radar with either the AN/TYQ-23(V)1 or the AN/TYQ-23(V)4 as the principal sensor of the TAOC. It may also be configured for operation with the ADCP to provide TBM data cues to Air Defense weapons systems.

### Operational Impact

The radar will be phased ashore in an amphibious operation, rapidly installed, and autonomously operated to provide a landward extension of the MAGTF Air Defense System. On command, the employment of the radar will be increased to include its primary function as a sensory device of the MACCS. In this phase of the operation, the radar data will be supplied to the TAOC of the MACCS for the TAOC GCI operations and air traffic control in the objective area. Additionally, to fulfill its TBM surveillance capability, the radar will supply radar cueing data. This TBM surveillance capability will exist in both the autonomous and the TAOM-automated configurations.

### Program Status

Research and development efforts beginning in FY01 will develop Engineering Change Proposals (ECP) to replace obsolete hardware and to ensure the AN/TPS-59 (V) 3 remains viable through 2015. These ECPs will be implemented in FY02 through FY06

Procurement Profile	FY02	FY03
Quantity:	0	0

Developer/Manufacturer	Lockheed Martin Corporation, Naval Electronics & Surveillance Systems (NE&SS), Syracuse, NY
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# Composite Tracking Network (CTN)

## Description

The CTN system is an adaptation of the U.S. Navy's Cooperative Engagement Capability (CEC) Cooperative Engagement Transmission Processing Set (CETPS) designed to meet the USMC's requirement. CTN will provide a sensor netting capability that will allow the Marine Corps to participate in a cooperative engagement environment. It will be able to receive, generate and distribute composite sensor data to C2 and weapons platforms. The system will be comprised of durable, scaleable, and modular components that meet the expeditionary operational requirements of the Marine Corps. The CTN system will be employed by the MACCS and provide information to the network that is derived from its organic sensors, as well as use information from other forces sensors, improving real-time situational awareness. Specific Marine Air Control Group (MACG) units that will operate and maintain the system include, but are not limited to, the Marine Air Control Squadron (MACS) and the Low Altitude Air Defense Battalion (LAAD Bn).

## Operational Impact

CTN facilitates broader air coverage of the battle force against all airborne threats. It enables land-based systems to expand the common air situational picture and facilitate a broad-based, wide-area land and air defensive posture, supportive of a Joint tactical commander and EMW.

## Program Status

IOC is planned for FY06 with FOC in FY07.

<b>Procurement Profile:</b>	<b>FY02</b>	<b>FY03</b>
<b>Quantity:</b>	0	0

<b>Developer/Manufacturer</b>	Hardware - Raytheon E-Systems, St. Petersburg, FL Software - John Hopkins University Applied Physics Laboratory, Laurel, MD CEC Systems Integration: Hardware - NSWC, Crane, IN
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## **Part 4 - Combat Service Support Element**

The CSSE is task-organized to provide all functions of tactical logistics necessary to support the continued readiness and sustainability of the MAGTF. The six functions of tactical logistics are: supply, maintenance, transportation, health services, engineering and other services. The CSSE may vary in size and composition from a support detachment to one or more Force Service Support Groups (FSSG). The CSSE, operating from seabases or from expeditionary bases established ashore, enables the sustainment of forces and extends the MAGTF's capabilities in time and space.

### ***Logistics Vehicle System Replacement (LVSR)***

#### ***Description***

The LVSR is the replacement for the current Marine Corps heavy tactical wheeled vehicle, the LVS. As the Marine Corps' heavy tactical distribution system, the LVSR will be a heavy tactical vehicle that will transport bulk liquids (fuel and water), ammunition, standardized containers, bulk/break bulk/palletized cargo, bridging equipment, engineer equipment, and combat vehicles; perform wrecker/recovery missions; and tow semi trailers. The system will encompass a cargo handling variant, a fifth wheel trailer variant for towing heavy trailers, and a wrecker variant.



#### ***Operational Impact***

Throughout the world, the Marine Corps deploys MAGTFs, which must be prepared to conduct expeditionary operations across the operational continuum. To successfully accomplish its mission, the MAGTF requires a heavy ground logistics distribution system that is highly mobile, efficient, extremely reliable, and flexible. The LVSR will be capable of operating over increased distances with increased payloads and will rapidly distribute all classes of supply while including a self-loading/unloading capability to reduce dependence on external Materials Handling Equipment (MHE).

In addition, the LVSR will transport fifth wheel trailers, tactical bridging, flatracks, standardized containers to twenty feet, provide heavy equipment transport (to include combat vehicles), and perform heavy wrecker recovery. The LVSR will be employed throughout the MAGTF in the Force Service Support Group (FSSG), the Marine Division, and the Marine Aircraft Wing (MAW).



**Program Status**

Phase 0 activities for the LVSR program included the building and testing of three technical demonstrators. The technical demonstrators underwent both performance and an accelerated durability test. The Analysis of Alternatives was completed by MCCDC in July 2001 and was formally signed in August 2001. MCCDC is finishing final work on the ORD for MROC approval in early 2002. A Life Cycle Cost Estimate has been completed.

<b>Procurement Profile</b>	<b>FY02</b>	<b>FY03</b>
<b>Quantity:</b>	0	0
<b>Developer/Manufacturer</b>	TBD	



**High Mobility Multipurpose Wheeled Vehicle A2 (HMMWVA2) Series**

**Description**

The HMMWV fleet is scheduled to be completely replaced by FY07 based on current budget projections. The HMMWVA2 will replace vehicles in the existing HMMWV fleet on a one-for-one basis. Features of the HMMWVA2 include an improved corrosion prevention package, fully independent suspension, electronically controlled 4-speed automatic transmission, an EPA compliant 6.5L diesel engine, improved brakes, an improved electrical system, three-point seatbelts, and increased payload capacity.

**Operational Impact**

Current HMMWVA2 replacement strategy will sustain operational capability while improving Reliability, Availability, Maintainability, and Durability (RAM-D), safety, and corrosion prevention in the light tactical vehicle fleet.

**Program Status**

The HMMWVA2 Program is a Joint effort (U.S. Army lead). Production and U.S. Army procurement of the HMMWVA2 began in August 1996. USMC procurement of the HMMWVA2 began in July 1998, with first deliveries occurring in December 1998. IOC was achieved in December 1999.

<b>Procurement Profile</b>	<b>FY02</b>	<b>FY03</b>
<b>Quantity:</b>	1564	1685

**Developer/Manufacturer** AM General Corporation





## **Medium Tactical Vehicle Replacement (MTVR)**

### **Description**

The MTVR will replace the current medium fleet of 5-ton trucks. The MTVR has an increased payload of 7.1 tons cross-country and 15 tons on hard surface roads and can simultaneously tow up to an 11 ton towed load. The MTVR has a 70% off road and 30% on road mission profile and is capable of sustained speeds of 30 mph cross-country.

### **Operational Impact**

The MTVR replaces the aging M939/M809 5-ton trucks with a fleet of state-of-the art, commercially based medium trucks with greater mobility, lift, and RAM-D.

### **Program Status**

The MTVR program is currently in Low Rate Initial Production. The MDA granted the Milestone III decision in April 2001, authorizing Full Rate production, which will commence in September 2001. Trucks began fielding in April 2001.

The cargo variants will be fielded from FY01 through FY04. A sole source contract for development of the wrecker and dump truck was awarded in July 1999. Variant production will be in the last production year (FY03) with fielding in FY03.

### **Procurement Profile**

#### **Quantity:**

**FY02**

1959

**FY03**

1862

### **Developer/Manufacturer**

Oshkosh Truck Corporation, Oshkosh, WI





# Aviation Refueling Capability (ARC)

## Description

The ARC is a self-propelled 5,000 gallon commercial refueler modified for Marine Corps use. The ARC provides a mobile aviation refueling capability to the Marine Aircraft Wing supporting establishment. The ARC has been procured through a General Services Administration contract.

## Operational Impact

The fielding of the ARC and subsequent off road aviation refueling system will enable the Marine Corps to phase the aged M970 semi-trailer out of the inventory. The M970 was fielded in the 1970s, with a follow on buy in 1994, and has of late been experiencing readiness problems. The ARC provides the M970 basic capabilities with several technological advancements. The prime mover for the off road system will be the LVS and MK18A1 thus enabling an improved ability to carry fuel cross-country to Forward Arming and Refueling Points (FARP).

## Program Status

A field user evaluation was conducted by Program Manager (PM) Transportation during Feb-Apr 01. Milestone III was achieved in July 01. In Aug 01, the FY01 funding was obligated. The procurement is on contract with GSA with deliveries due in March/April 02.

Procurement Profile	FY02	FY03
Quantity:	0	0

Developer/Manufacturer Isometric, Reidsville, NC





**Extended Boom Forklift (EBFL)**

**Description**

The EBFL replacement will provide the Marine Corps with a 10,000 pound capacity forklift truck that is capable of horizontally extending its fork boom to stuff and unstuff a standard 40 x 48 inch military pallet weighing up to 4000 pounds to/from the opposite end of an International Organization for Standardization (ISO) 8 x 8 x 20-foot container, either on or off a trailer. This EBFL will be capable of operating over uneven and unprepared surfaces (rough terrain) to include sand, snow, and mud. The EBFL will be utilized for handling ammunition, cargo, and supplies weighing up to the forklift's rated capacity. It is air transportable by CH-53 and C130 without disassembly and has an enclosed cab that allows for extended operations in all-weather conditions.



**Operational Impact**

The current 10,000-pound capacity forklift, model MLULL10K , fielded from 1988 to 1992, has passed its 10-year projected service life. Procurement of the new EBFL will ensure that the Marine Corps is able to accomplish its assigned mission and meet operational availability requirements. It will replace the MLULL10K on a one-for-one basis in order to minimally impact the operating forces.

**Program Status**

An IDIQ contract was awarded in April 2001. The initial procurement quantity of four forklifts was delivered to Aberdeen Test Center, and they are currently undergoing evaluation. Upon successful user evaluation, production approval will be requested from the MDA and a delivery order for additional quantities will be issued by MARCORSYSCOM.

**Procurement Profile**  
**Quantity:**

**FY02**  
0

**FY03**  
0

**Developer/Manufacturer** TRAK International Inc.  
Port Washington, WI



## ***Family of Containers***

### ***Description***

The Family of Container provides the Marine Corps with a fully intermodal transport capability emphasizing dimensional standardization and International Standards Organization (ISO) to ensure compatibility. MARFOR units store and transport small organic equipment and consumable supplies in the containers. The containers are capable of safe and efficient use in all areas, under all climatic conditions. They can be transported on MARFOR organic vehicles, over all types of terrain on which MAGTFs deploy. The containers are also transportable on Navy amphibious ships, commercial cargo ships, and Air Force prime mission aircraft. Two types of containers are procured, The Palletized Container (PALCON) and Quadruple Container (QUADCON). The PALCON and its accessories are used for storage and transportation of organic equipment and consumable supplies during deployment and in garrison. The QUADCON is a lockable, weatherproof, prefabricated steel container that is accessible through double doors on both sides. It has four-way tineways for forklift transport.



### ***Operational Impact***

The family of cargo containers provides a significant increase in current capability by using modern technology to containerize and unitize break-bulk cargo in a weather tight, prefabricated, dimensionally standard and reusable containers. They have the capability to integrate with containerships and other merchant vessels. They are a more efficient method of packaging and moving of cargo. They provide the degree of containerization required for rapid and efficient movement to the AOA.



**Program Status**

**QUADCONS**

Thirty percent of the QUADCONS have already been fielded. A recompeted QUADCON production contract was awarded May 1999. The IOC for the Marine Corps was 2nd Qtr FY94 and FOC is scheduled for FY08.

**PALCONS**

Thirty percent of the PALCONS have already been fielded. An RFP to recompete the initial production contract was released in Feb 99, with contract awarded in 4th QTR FY99. IOC for the Marine Corps was 2nd Qtr FY94 and FOC is scheduled for FY08.

<i>Procurement Profile</i>	<i>FY02</i>	<i>FY03</i>
<i>QUADCON Quantity:</i>	2346	0
<i>PALCON Quantity:</i>	5151	0

<i>Developer/Manufacturer</i>	QUADCONS - Charleston Marine Containers Inc. Charleston, SC
	PALCONS - Plastics Research Inc. Santa Fe Springs, CA





## **Part 5 - Supporting Establishment**

The SE recruits, trains, equips and sustains Marines enabling them to conduct expeditionary operations in increasingly complex and dangerous environments. The SE is vital to the success of Marine Corps forces conducting expeditionary operations. Bases and stations of the SE provide the training areas, ranges, and the modeling and simulation facilities necessary to prepare Marines and their units for combat. The SE also provides facilities and support to the families of deployed Marines, allowing Marines to concentrate fully on their demanding missions without undue concern for the welfare of their families.

### ***Multiple Integrated Laser Engagement System 2000 (MILES 2000)***

#### ***Description***

Provides updated capability for tactical engagement simulation for force-on-force training. Uses a low power, eye safe laser that replicates the direct fire characteristics of the weapons in the GCE's infantry, assault, armor, and anti-armor systems.

#### ***Operational Impact***

MILES 2000 provides the gunner with hit or miss determination and an overall after action review capability. The current inventory of MILES equipment is technologically inferior and has reached the end of its lifecycle. Additionally, the currently fielded MILES does not provide equipment for a vast majority of Marine Corps weapons and combat vehicles. The Marine Corps has signed a Memorandum of Understanding (MOU) with the other Services pledging our support in a coordinated Joint instrumented range venture; MILES 2000 is being procured with that in mind.

#### ***Program Status***

MILES 2000 is a Joint interest program with the Army as the lead agency. MILES 2000 has been approved for full rate production. The Marine Corps fielding plan calls for 10 reinforced infantry battalion sets.

<b><i>Procurement Profile</i></b>	<b><i>FY02</i></b>	<b><i>FY03</i></b>
<b><i>Quantity:</i></b>	0	0



***Developer/Manufacturer*** Prime Contractor  
Cubic Defense Systems (CDS)  
San Diego, CA

Major Subcontractors:  
Cubic de Mexico, Tijuana, MX  
ICON, CA  
OSCMAR, New Zealand  
DIEHL, Germany



**Distance Learning (DL) Program**

**Description**

DL is a USMC Electronic Learning Infrastructure that will enable Marines to receive training via the appropriate interactive media when and where the learning is needed. DL will provide access to learning resources and performance support tools to a greater population of Marines. DL will increase the effectiveness of training and education through use of technology. Efficiencies generated by the system will enable the Marine Corps to increase manning in the operational forces by shortening the training process.

**Operational Impact**

The DL Program contributes to the Marine Corps' operational readiness by providing all Marines local military occupational specialty (MOS) and educational training. DL capabilities and facilities will reduce the amount of time Marines are required to be away from their home duty station attending formal schools. Additionally, the application of DL technologies may shorten the length of some formal school courses. DL will give the Commander a better-trained Marine while increasing personnel availability to accomplish the unit's mission.

**Program Status**

During FY01, DL continued fielding at Camp Lejeune, NC; MCB Camp Pendleton, CA; and MCB Quantico, VA. Learning Resource Centers will also be established at MCAS New River, NC; Camp Butler, Japan; MCRD San Diego, CA; MCLB Barstow, CA; MARFORRES, New Orleans, LA; Ft. Leonardwood, MO; Ft. Knox, KY; and Defense Language Institute, Monterey, CA.

<b>Procurement Profile</b>	<b>FY02</b>	<b>FY03</b>
<b>Quantity:</b>	0	0

**Developer/Manufacturer** PM NMCI/IT using multiple vendors



**Indoor Simulated Marksmanship Trainer-Enhanced (ISMT-E)**

**Description**

The ISMT-E is an interactive audio/video weapons simulator that enhances marksmanship training and weapons employment training. The system consists of infantry weapons that use lasers to engage a variety of lanes, video, and computer generated imagery (CGI) scenarios.

**Operational Impact**

Complete fielding of the ISMT-E will allow all active and reserve units to train Marines on a variety of weapons to Individual Training Standards in a simulated environment. The ISMT-E upgraded digital graphics are in open flight format and are Hight Level Architecture (HLA) compliant. This enables Marines located at different facilities to interface with other emerging training systems that comply with the HLA protocol. Funding cuts in live fire ammunition, range reductions, environmental hazards, and safety concerns limit live fire training.

**Program Status**

The contract was awarded in Dec. 2000. Base year fielding began in June 2001. During the Base Year, 97 ISMT are to be upgraded to the enhanced configuration, (22) M-4 will be purchased, 97 JSCS, 1 year of CLS will be funded, and instructor operator training will be purchased. Option Year 1 was awarded March 2001 to upgrade 100 systems and conduct instructor operator training. Option 2 calls for the procurement of up to an additional 200 upgrade kits.

<b>Procurement Profile</b>	<b>FY02</b>	<b>FY03</b>
<b>Quantity:</b>	200	0
<b>Developer/Manufacturer</b>	Firearms Training Systems (FATS) Suwanee, GA	



**Combined Arms Command and Control Training Upgrade System (CACCTUS)**

**Description**

The CACCTUS is an upgrade for the Combined Arms Staff Trainer (CAST). It provides realistic C2 integration and fire support coordination training for MAGTF staffs up to and including the MEB level. It provides enhanced 2D and 3D visualization of the battlespace and scenario development. The upgrade will incorporate command and control training systems such as the Joint Simulation System (JSIMS) and a reconfigurable communications capability. All CAST systems will be integrated through a common network architecture to provide the ability to accomplish distributed training.

**Operational Impact**

The CAST Upgrade will prepare Combined Arms Exercise (CAX) participants by providing the most effective classroom training and pre-CAX rehearsal.

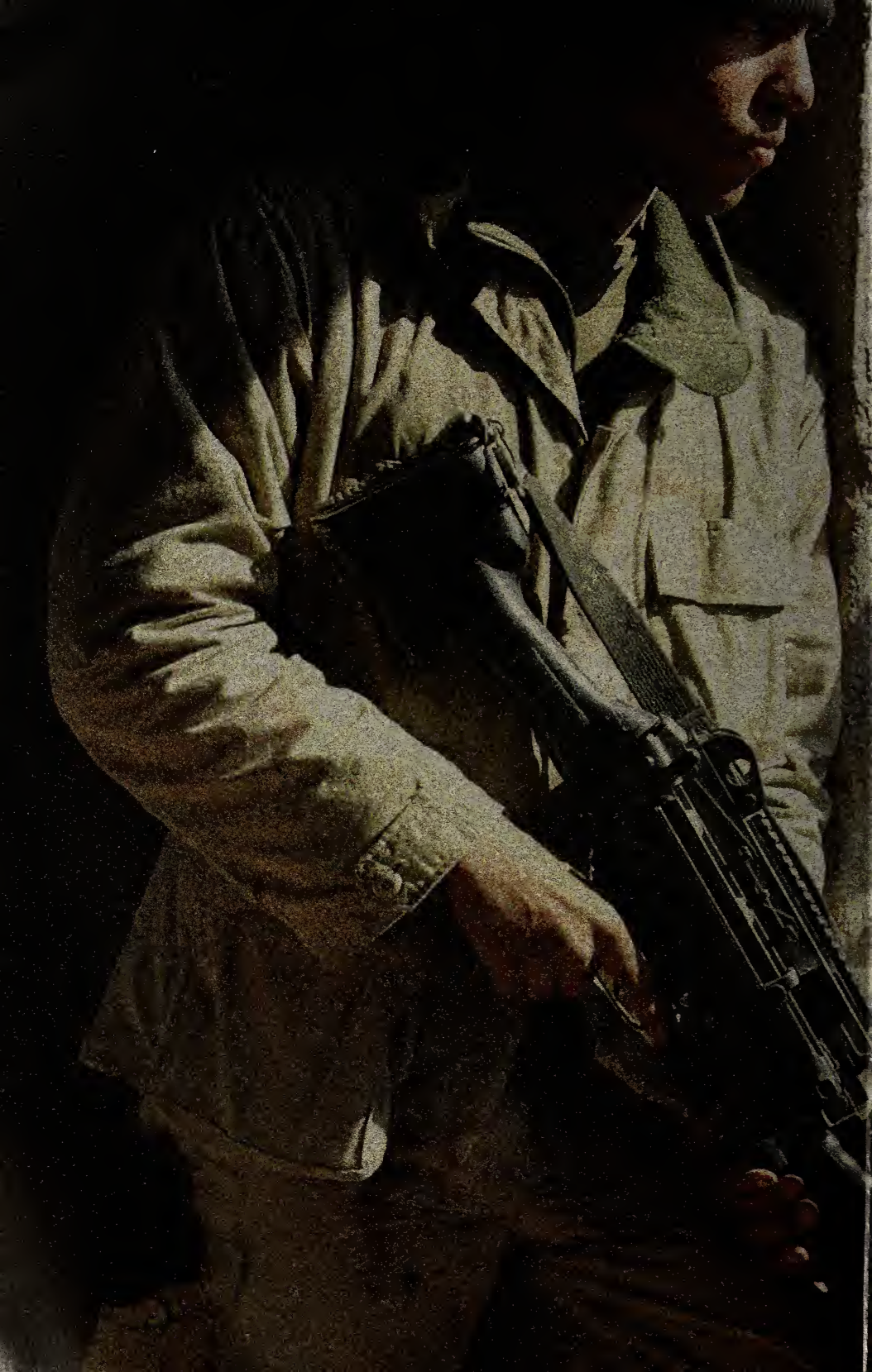
**Program Status**

Contract was awarded in September 2001. The contractor/government team will investigate training technology that have the potential for transition into the CAST trainer and improve the training effectiveness of the system.

<b>Procurement Profile</b>	<b>FY02</b>	<b>FY03</b>
<b>Quantity:</b>	0	0

**Developer/Manufacturer** MTS Technologies, Inc. Arlington, VA







# APPENDIX

# A

## ACRONYMS



## **Appendix C – Acronyms**

This appendix provides a list of acronyms commonly used in Marine Corps correspondence, publications, and daily dialogue, and is provided for reference purposes. Not all listed acronyms are included in this publication.

AAO	Approved Acquisition Objective
AAAV	Advanced Amphibious Assault Vehicle
AAP	Abbreviated Acquisition Program
AAV	Assault Amphibious Vehicle
AAW	Anti-Air Warfare
AAWS-H	Anti-Armor Weapon System-Heavy
AAWS-M	Advanced Antitank Weapon System-Medium
ABC/M	Activity Based Costing and Management
ABT	Air Breathing Targets
ABV	Assault Breacher Vehicle
ACADA	Automatic Chemical Agent Detector Alarm
ACAT	Acquisition Category
ACE	Aviation Combat Element
ACM	Air Contingency MAGTF
ACP	Aviation Continuation Pay
ACS	Advanced Countermine System
AC2S	Airborne Command and Control System
ACTD	Advanced Concept Technology Demonstration
ADCP	Air Defense Communications Platform
ADFC	Advanced Digital Fire Control System
ADM	Acquisition Decision Memorandum
ADS	Advanced Distributed Simulation/Active Denial System
AE	Assault Echelon
AFATDS	Advanced Field Artillery Tactical Data System
AFOE	Assault Follow-On Echelon
AFV	Armored Fighting Vehicle
AGLEP	Advanced Ground Laser Eye Protection
AGS	Advanced Gun System
AIT	Automated Identification Technology
ALAM	Advanced Land Attack Missile
ALC	Area Learning Center
ALEP	Amphibious Lift Enhancement Plan
ALICE	All-Purpose Lightweight Individual Carrying Equipment
AMC	Air Mobility Command
AMCM	Airborne Mine Countermeasures
AMRAAM	Advanced Medium Air to Air Missile
ANAD	Anniston Army Depot
ANBACIS	Automated Nuclear Biological and Chemical Information System
ANGLICO	Air/Naval Gunfire Liaison Company



AOA	Analysis of Alternatives
AOR	Area of Responsibility
AP	Anti-Personnel
APN	Aircraft Procurement Navy
APOBS	Antipersonnel Obstacle Breaching System
APOD/E	Air Port Of Debarkation/Embarkation
APS	Active Protection System
ARC	Aviation Refueler Capability
ARDEC	Army Research Development and Engineering Center
ARG	Amphibious Ready Group
AS	Analysis Substation
ASPARCS	Air Surveillance and Precision Approach Radar Control System
ASUW	Antisurface Warfare
ASVAB	Armed Services Vocational Aptitude Battery
ASW	Antisubmarine Warfare
AT	Antiterrorism
AT&L	Acquisition, Technology and Logistics
ATACC	Advanced Tactical Air Command Center
ATACMS	Army Tactical Missile System
ATARS	Advanced Tactical Airborne Reconnaissance System
ATC	Air Traffic Control
ATD	Advanced Technology Demonstration
ATF	Amphibious Task Force
AT/FP	Antiterrorism/Force Protection
ATL	Advanced Tactical Laser
ATLASS	Asset Tracking Logistics and Supply System
ATM	Asynchronous Transfer Mode
ATO	Air Tasking Order
ATR	Aided Target Recognition
AUTODIN	Automated Digital Network
AVDTV	Armored Vehicle Driver's Thermal Viewer
AVDVE	Armored Vehicle Driver's Vision Enhancer
AWE	Advanced Warfighting Experiment
BA	Budget Activity/Authority
BAH	Basic Allowance for Housing
BDA	Battle Damage Assessment/Bomb Damage Assessment
BFV	Bradley Fighting Vehicle
BMAR	Backlog of Maintenance and Repair
BMDO	Ballistic Missile Defense Office
BOS	Base Operating Support
BRAC	Base Realignment and Closure
BSSG	Brigade Service Support Group
BST	Basic Skills Trainer
BTI	Base Telecommunications Infrastructure



BU	Block Upgrade
BUMED	Bureau of Medicine
BUR	Bottom-Up Review
BV	Base Vehicle
C2	Command and Control
C2PC	Command and Control Personal Computer
C3I	Command, Control, Communications and Intelligence
C4I	Command, Control, Communications, Computers and Intelligence
C4I2	Command, Control, Communications, Computers, Intelligence and Interoperability
C4ISR	Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance
CAC2S	Common Aviation Command and Control System
CACCTUS	Combined Arms Command and Control Training Upgrade System
CAEMS	Computer-Aided Embarkation Management System
CAM	Chemical Agent Monitor
CARAT	Cooperation Afloat Readiness and Training
CAST	Combined Arms Staff Trainer
CASTFOREM	Combined Arms and Support Task Force Evaluation Model
CATF	Commander Amphibious Task Force
CAX	Combined Arms Exercise
CBIRF	Chemical/Biological Incident Response Force
CBIS	Chemical/Biological Individual Sampler
CBMRS	Concept Based Munitions Requirement System
CBRNE	Chemical Biological Radiological Nuclear Explosive
CBRP	Concept Based Requirements Process
CBRS	Concept Based Requirements System
CBV	Combat Breacher Vehicle
CCA	Clinger-Cohen Act
CCD	Charged Coupled Device
CCP	Consolidated Cryptologic Program
CCS	COMINT Collection Subsystem
CCS-OS	CCS Outstation
CD	Counter-drug
CDPU	Computer Data Processing Unit
CDR	Critical Design Review
CDS	Combat Development System
CE	Command Element
CEC	Cooperative Engagement Capability
CECM	Communications Electronic Countermeasures
CENTCOM	Central Command
CETPS	Cooperative Engagement Transmission Processing Set
CFAC	Clear Facilities



CFC	Combined Forces Command
CFR	Crash Fire and Rescue
CG	Commanding General
CI/HUMINT	Counter Intelligence/Human Intelligence
CIA	Central Intelligence Agency
CIARDS	CIA Retirement and Disability System
CIC	Combat Integration Capability
CID	Combat Identification
CIGSS	Common Imagery Ground/Surface System
CIHEP	Center Intelligence/Human Intelligence Equipment Program
CINC	Commander-in-Chief
CINCCENT	Commander-in-Chief Central Command
CINCEUR	Commander-in-Chief European Command
CINCJFCOM	Commander-in-Chief Joint Forces Command
CINC-LANTFLT	Commander-in-Chief Atlantic Fleet
CINCPAC	Commander-in-Chief Pacific
CINC-PACFLT	Commander-in-Chief Pacific Fleet
CINCSOUTH	Commander-in-Chief Southern Command
CIO	Chief Information Officer
CJCS	Chairman Joint Chiefs of Staff
CJF	Commander Joint Force
CJTF	Commander Joint Task Force
CLASS	Closed Loop Artillery Simulation System
CLAWS	Complementary Low Altitude Weapon System
CM	Consequence Management
CMC	Commandant of the Marine Corps
CMOS	Cargo Movement Operations System
CMV	Combat Mobility Vehicle
CNA	Center for Naval Analyses
CNO	Chief of Naval Operations
COBRA	Coastal Battlefield Reconnaissance and Analysis
COC	Combat Operations Center
COE	Common Operating Environment
COE	Concept of Employment
COMINT	Communications Intelligence
COMMARFOREUR	Commander, Marine Forces, Europe
COMMARFORLANT	Commander, Marine Forces, Atlantic
COMMARFORPAC	Commander, Marine Forces, Pacific
COMMARFORRES	Commander, Marine Forces, Reserve
COMNAV	Communications Navigation
COMSEC	Communications Security
COMUSNAVCENT	Commander U.S. Navy Central
COMUSNAVEUR	Commander U.S. Navy Europe
COMUSNAVPAC	Commander U.S. Navy Pacific
CONPLAN	Contingency Plan



CONUS	Continental United States
COP	Common Operational Picture
CORM	Commission on Roles and Missions of the Armed Forces
COTS	Commercial off-the-Shelf
CP	Command Post
CPA	Chairman's Program Assessment
CPE	Collective Protection Environment
CPG	Commandant's Planning Guidance
CPR	Chairman's Program Review
CPU	Central Processing Unit
CPX	Command Post Exercise
CQB	Close Quarters Battle
CR	Combat Requirement
CRDEC	Chemical Research Development & Engineering Center
CRS	Canteen Refilling System
CS	Communication Subsystem
CSAR	Combat Search and Rescue
CSS	Combat Service Support
CSSD	Combat Service Support Detachment
CSSE	Combat Service Support Element
CSSE SDE	Combat Service Support Element Shared Data Environment
CSSE SE	Combat Service Support Element Supporting Establishment
CT	Counter Terrorism
CTAPS	Contingency Theater Automated Planning System
CTI	Central Tire Inflation
CTN	Composite Tracking Network
CTOL	Conventional Take Off and Landing
CTP	Common Tactical Picture
CTT	Commanders Tactical Terminal
CU	Cooperating Unit
CV	Aircraft Carrier
CVAT	Combat Vehicle Appended Trainer
CVBG	Carrier Battle Group
CVW	Carrier Air Wing
CWT	Customer Wait Time
CY	Calendar Year
DA	Direct Action
DAB	Defense Acquisition Board
DACT	Data Automated Communications Terminal
DAMA	Demand Assigned Multiple Access
DARP	Defense Airborne Reconnaissance Program
DARPA	Defense Advanced Research Projects Agency
DART	Defense Assistance Response Team



DASC	Direct Air Support Center
DAWMS	Deep Attack Weapons Mix Study
DBBL	Dismounted Battlespace Battle Lab
DBOF	Defense Business Operations Fund
DCP	Defense Cryptologic Program
DCU	Dynamic Component Upgrade
DDG	Guided Missile Destroyer
DDS	Data Distribution System
DEP	Delayed Entry Program
DEPTempo	Deployment Tempo
DF	Direction Finding
DFT	Deployments for Training
DGIAP	Defense General Intelligence and Applications Program
DHP	Defense Healthcare Program
DHS	Defense HUMINT Service
DIA	Defense Intelligence Agency
DICP	Defense Intelligence Counterdrug Program
DII	Defense Information Infrastructure
DIMAP	Defense Imagery and Mapping Program
DIS	Distributed Interactive Simulation
DISA	Defense Information Systems Agency
DISTP	Defense Special Technology Program
DITP	Defense Intelligence Tactical Program
DJCIP	Defense Joint Counterintelligence Program
DL	Distance Learning
DLC	Distance Learning Center
DLI	Defense Language Institute
DMRD	Defense Management Review Decision
DMS	Defense Messaging System
DMSO	Defense Modeling and Simulation Office
DMSS	Defense Medical Surveillance System
DOA	Days of Ammunition
DoD	Department of Defense
DoN	Department of the Navy
DOS	Days of Supply
DoS	Department of State
DOTMPLF	Doctrine, Organization, Training, Manpower, Personnel, Logistics and Facilities
DPE	Data Processing Equipment
DPG	Defense Planning Guidance
DPP	Defense Program Projection
DPRB	Defense Planning and Resources Board
DR	Digital Radiography
DSCS	Defense Satellite Communications System
DSN	Defense Switched Network
DSRP	Defense Space Reconnaissance Program



DST	Decision Support Tools
DT	Developmental Test
DTC	Digital Technical Control
DTS	Defense Transportation System
DWIS PIP	Digital Wideband Transmission System Product Improvement Program
EA	Electronic Attack
EAF	Expeditionary Airfield
EB	Enlistment Bonus
EBFL	Extended Boom Forklift
EDM	Engineering Development Model
EHF	Extremely High Frequency
ELB	Extended Littoral Battlespace
ELINT	Electronics Intelligence
E-MAIL	Electronic Mail
EMD	Engineering and Manufacturing Development
EMW	Expeditionary Maneuver Warfare
E-NBC	Enhanced NBC Capability
EO	Electro Optical
EOB	Electronic Order of Battle/Enemy Order of Battle
EOD	Explosives Ordnance and Disposal
EP	Electronic Protection
EPLRS	Enhanced Position Location Reporting System
EPUU	Enhanced PLRS User Units
ERGM	Extended Range Guided Munitions
ERIP	Engine Reliability Program
EROWPU	Enhanced Reverse Osmosis Water Purification Unit
ES	Equipment Suite
ESP	Extended Service Program
ESS	Electronics Intelligence (ELINT) Support System
ETSS	Extended Training Service Specialist
EUCOM	European Command
EUL	Economic Useful Life
EUT	End User Terminal
EW	Electronic Warfare
FAC	Forward Air Controller
FARP	Forward Arming and Refueling Point
FASCAM	Family of Scatterable Mines
FAST	Fleet Antiterrorism Security Team
FATS	Firearms Training System
FAV	Fast Attack Vehicle
FCIP	Foreign Counterintelligence Program
FDC	Fire Direction Center
FDNF	Forward Deployed Naval Forces
FDP	FAST Deployment Program
FDS	Field Development System



FEA	Front End Analysis
FEP	Firepower Enhancement Program
FEX	Field Exercise
FH	Frequency Hopping
FHMC	Family Housing Marine Corps
FIE	Fly-in Echelon
FIU	Force Imagery Interpretation Unit
FIM	Family of Improved Mortars
FLC	Functional Learning Center
FLIR	Forward Looking Infrared
FLPP	Foreign Language Proficiency Pay
FM	Frequency Modulation
FMF	Fleet Marine Force
FO	Forward Observer
FOB	Forward Operating Base
FOC	Full Operational Capability
FOF	Floating Offshore Facility
FOM	Family of Munitions
FOTS	Follow-on-to-Shoulder-Launched Multipurpose Assault Weapon (SMAW)
FOTT	Follow-on-to-TOW
FP	Force Protection
FPLIF	Field Pack Large with Internal Frame
FPU	Front Power Unit
FRP	Full Rate Production
FRSS	Forward Resuscitative Surgery System
FSAS	Initial Fire Support Automated System
FSC2S	Fire Support Command and Control System
FSCC	Fire Support Coordination Center
FSED	Full Scale Engineering Development
FSRM	Facilities Sustainment Restoration and Modernization
FSSG	Force Service Support Group
FTE	Full Time Equivalent
FTL	Far Target Location
FTS	Full Time Support
FTSS	Family of Tactical Soft Shelters
FY	Fiscal Year
FYDP	Future Year Defense Plan
FYEP	Five Year Experimentation Plan
GBS	Global Broadcast Service
GCCS	Global Command and Control System
GCE	Ground Combat Element
GCS	Ground Control Station
GCSS	Global Command Support System
GCSS-MC	Global Command Support System-Marine Corps
GDIP	General Defense Intelligence Program



GLPS	Gun Laying and Positioning System
GME	Garrison Mobile Equipment
GMF	Ground Mobile Forces
GOPLAT	Gas and Oil Platform
GOTS	Government off-the-Shelf
GP	General Purpose
GPR	Ground Processing Requirement
GPS	Global Positioning System
GTN	Global Transportation Network
GWOT	Global War On Terrorism
HARM	High-Speed Anti-radiation Missile
HAW	Heavy Anti-armor Weapon
HE	High Explosive
HEMTT	Heavy Expanded Mobility Tactical Truck
HERCULES	Heavy Equipment Recovery Combat Utility Lift and Evacuation System
HF	High Frequency
H-HMMWV	Heavy Variant High Mobility Multipurpose Wheeled Vehicle
HIMARS	High Mobility Artillery Rocket System
HLA	High Level Architecture
HMD	High Mobility Downsize
HMH	Marine Heavy Helicopter Squadron
HMLA	Marine Light Attack Helicopter Squadron
HMM	Marine Medium Helicopter Squadron
HMMWV	High Mobility Multipurpose Wheeled Vehicle
HMX	Marine Executive Helicopter Squadron (President)
HNS	Host Nation Support
HQMC	Headquarters, U.S. Marine Corps
HSV	High Speed Vessel
HUD	Heads-Up Display
HUMINT	Human Source Intelligence
HWM	High Water Mark
HWTS	Heavy Weapons Thermal Sight
I2	Image Intensification
IA	Information Assurance
IAC	Intelligence Analysis Center
IAS	Intelligence Analysis System
ICAD	Individual Chemical Agent Detector
ICCE	Individual Combat Clothing and Equipment
IDASC	Improved Direct Air Support Center
IDIQ	Indefinite Duration, Indefinite Quantity contract
IED	Improved Explosive Device
IELD	Improved External Lift Device
IEWCS	Intelligence and Electronic Warfare Common Sensor
IFAV	Interim Fast Attack Vehicle



IFF	Identification Friend or Foe
IHR	In-extremis Hostage Rescue
IICS	Integrated Infantry Combat System
ILC	Integrated Logistics Capability
IMI	Interactive Multimedia Instruction
IMINT	Imagery Intelligence
INFOSEC	Information Security
INRMP	Integrated Natural Resource Management Plans
INS	Inertial Navigation System
INTEL	Intelligence
IO	Information Systems
IOC	Initial Operational Capability
IOT	Initial Operational Test
IOT&E	Initial Operational Test and Evaluation
IOW	Intelligence Operations Workstations
IPCOT	In-Place Continuation of Overseas Tour
IPT	Integrated Process Team
IR	Infrared
IRAM	Improved Reliability and Maintainability
IROAN	Inspect and Repair Only as Necessary
IR3B	Integrated Resources and Requirements Review Board
IRR	Individual Ready Reserve
IRV	Improved Recovery Vehicle
IS	Interim Standardization/Information Systems
ISDN	Integrated Services Digital Network
ISMT	Indoor Simulated Marksmanship Trainer
ISMT-E	Indoor Simulated Marksmanship Trainer-Enhanced
ISP	Internet Service Provider
ISO	International Organization for Standardization
ISR	Intelligence, Surveillance and Reconnaissance
ISSA	Inter-Service Support Agreement
IST	Infantry Squad Trainer
ISURSS	Interim Small Unit Remote Scouting Systems
IT	Information Technology
ITAS	Improved Target Acquisition System
ITV	Internally Transportable Vehicle
ITV	In-Transit Visibility
IWAR	Integrated Warfare Architecture
JAC	Joint Analysis Center
JBPDS	Joint Biological Point Detection System
JCAD	Joint Chemical Agent Detector
JCAS	Joint Close Air Support
JCATS	Joint Conflict and Tactical Simulation
JCD&E	Joint Concept Development & Experimentation
JCS	Joint Chiefs of Staff
JDAM	Joint Direct Attack Munitions



JFACC	Joint Force Air Component Commander
JFC	Joint Forces Commander
JFCOM	Joint Forces Command
JFLCC	Joint Force Land Component Commander
JFMCC	Joint Force Maritime Component Commander
JHSV	Joint High Speed Vessel
JIATF-E	Joint Interagency Task Force – East
JIATF-W	Joint Interagency Task Force – West
JIC	Joint Intelligence Center
JI&I	Joint Integration & Interoperability
JIPT	Joint Integrated Product Team
JLUS	Joint Land Use Studies
JM	JTIDS Module
JMA/SA	Joint Mission Area/Support Area
JMASS	Joint Modeling and Simulation System
JMCIS UB	Joint Maritime Command Information System Unified Build
JMIP	Joint Military Intelligence Program
JNLWD	Joint Non-Lethal Weapons Directorate
JNLWP	Joint Non-Lethal Weapons Program
JNMS	Joint Network Management System
JOA	Joint Operations Area
JOPES	Joint Operation Planning and Execution System
JOTS	Joint Operational Tactical System
JPO-BIO	Joint Program Office for Biological Defense
JSEAD	Joint Suppression of Enemy Air Defenses
JROC	Joint Requirements Oversight Council
JSCP	Joint Strategic Capabilities Plan
JSF	Joint Strike Fighter
JSFXD	Joint Service Fixed Site Decontamination
JSIG	Joint Service Integration Group
JSIMS	Joint Simulation System
JSIPS	Joint Services Imagery Processing System
JSIPS TEG	Joint Services Imagery Processing System Tactical Exploitation Group
JSLIST	Joint Service Lightweight Integrated Suit Technology
JSLNBCRS	Joint Service Light NBC Reconnaissance System
JSLSCAD	Joint Services Lightweight Chemical Standoff Agent Detector
JSOW	Joint Standoff Weapon
JSTARS	Joint Surveillance Target Attack Radar System
JTF	Joint Task Force
JTF HQ	Joint Task Force Headquarters
JTIDS	Joint Tactical Information Distribution System
JTRS	Joint Tactical Radio System



JWARN	Joint Warning and Reporting Network
JWARS	Joint Warfare System
JWCA	Joint Warfighting Capability Assessment
JWFC	Joint Warfighting Center
JWID	Joint Warrior Interoperability Demonstrations
JWTC	Joint Warfare Training Center/Jungle Warfare Training Center
KPP	Key Performance Parameter
LAAD	Low Altitude Air Defense
LAAD	BN Low Altitude Air Defense Battalion
LAAM	Light Anti-Aircraft Missile
LAI	Light Armored Infantry
LAN	Local Area Network
LASM	Land Attack Standard Missile
LAV	Light Armored Vehicle
LAV-AD	Light Armored Vehicle-Air Defense
LAV-FIST	LAV-Full-Crew Interactive Simulator Trainer
LAV SLEP	LAV Service Life Extension Program
LCAC	Landing Craft Air Cushion
LEWDD	Lightweight Early Warning Detection Device
LHA	Amphibious Assault Ship - General Purpose
LHD	Amphibious Assault Ship - Multipurpose
LIC	Low Intensity Conflict
LLDR	Lightweight Laser Designator Rangefinder
LLI	Long Lead Item
LMCC	Logistics Movement Control Center
LME	Lightweight Maintenance Enclosure
LMS	Lightweight Multipurpose Shelter
LNBCRS	Lightweight Nuclear Biological and Chemical Reconnaissance System
LOE	Limited Objective Experiment
LOGAIS	Logistics Automated Information System
LPD	Amphibious Transport Dock [Ship]
LPH	Amphibious Assault Ship - Helicopter
LP/OP	Listening Post/Observation Post
LRA	Local Registration Authority
LRLAP	Long-Range Land Attack Projectile
LRC	Learning Resource Center
LRIP	Low Rate Initial Production
LRU	Line Replaceable Units
LSC	Light Strike Craft
LSD	Land Ship Dock
LST	Laser Spot Trackers/Landing Ship Tank/Troop
LTA	Launch Tube Assembly
LTVR	Light Tactical Vehicle Replacement
LUT	Limited User Test



LVS	Logistics Vehicle System
LW155	Lightweight 155mm Howitzer
LWH	Lightweight Helmet
LWTC	Littoral Warfare Training Complex
M&S	Modeling and Simulation
MAA	Mission Area Analysis
MACCS	Marine Air Command and Control System
MACP	Marine Aviation Campaign Plan
MACS	Magnetic Countermine System
MAG	Marine Aircraft Group
MAGIS	Marine Air-Ground Intelligence System
MAGTF	Marine Air-Ground Task Force
MAGTFTC	Marine Corps Air-Ground Task Force Training Center
MARCENT	Marine Forces Central Command
MARCORSYSCOM	Marine Corps Systems Command
MARDIV	Marine Division
MARFORCENT	Marine Forces Central
MARFOREUR	Marine Forces Europe
MARFORK	Marine Forces Korea
MARFORLANT	Marine Forces Atlantic
MARFORPAC	Marine Forces Pacific
MARFORRES	Marine Forces Reserve
MARFORSOUTH	Marine Forces South
MARINENET	Marine Corps Learning Network
MARS	Marine Aviation Requirements Study
MASINT	Measurement and Signature Intelligence
MATCALs	Marine Air Traffic Control and Landing System
MATCD	Marine Air Traffic Control Detachment
MATCOM	Marine Corps Materiel Command
MAW	Marine Aircraft Wing
MAW	Medium Anti-Armor Weapon
MAWTS-1	Marine Aviation Weapons and Tactics Squadron-One
MBC	Mortar Ballistic Computer
Mbps	Megabits per second
MBST	Marine Battle Skills Training
MBT	Main Battle Tank
MCARMS	Marine Corps Ammunition Requirements Management System
MCAS	Marine Corps Air Station
MCASS	Marine Common Application Support Software
MCB	Marine Corps Base
MCB	Mine Clearing Blade
MCCDC	Marine Corps Combat Development Command
MCCPIP	Marine Corps Continuous Process Improvement Program
MCCS	Marine Corps Community Services



MCDN	Marine Corps Data Network
MCEN	Marine Corps Enterprise Network
MCFSS	Marine Corps Fire Support System
MCHS	Marine Corps Common Hardware Suite
MCI	Marine Corps Institute
MCIA	Marine Corps Intelligence Activity
MCISU	Marine Corps Imagery Support Unit
MCLCP	Marine Corps Logistics Campaign Plan
MCM	Mine Countermeasures
MCMAP	Marine Corps Martial Arts Program
MCMP	Marine Corps Master Plan
MCMSO	Marine Corps Modeling and Simulation Management Office
MCMWTC	Marine Corps Mountain Warfare Training Center
MCNR	Military Construction Navy Reserve
MCON	Military Construction
MCOTEA	Marine Corps Onsite Test and Evaluation Activity
MCP	Mission Capability Package
MCPON	Master Chief Petty Officer of the Navy
MCPPI	Marine Corps Planning Process
MCRC	Marine Corps Recruiting Command
MCSF	Marine Corps Security Forces
MCSSC2	Marine Combat Service Support Command and Control
MCT	Marine Combat Training
MCTEEP	Marine Corps Training Exercise Employment Plan
MCTSSA	Marine Corps Tactical System Support Activity
MCWL	Marine Corps Warfighting Laboratory
MDA	Milestone Decision Authority
MDC	Materiel Distribution Center
MDL	MAGTF Data Library
MDSS	MAGTF Deployment Support System
MEB	Marine Expeditionary Brigade
MEB(AE)	Marine Expeditionary Brigade Assault Echelon
MEB(AT)	Marine Expeditionary Brigade (Antiterrorism)
MEF	Marine Expeditionary Force
MEP	Mobile Electric Power
MEP	Marine Enhancement Program
MEU	Marine Expeditionary Unit
MEU(SOC)	Marine Expeditionary Unit (Special Operations Capable)
MEWSS	Mobile Electronic Warfare Support System
MEWSS-PIP	Mobile Electronic Warfare Support System-Product Improvement Program
MFK	Mobile Field Kitchen
MFOM	MLRS Family of Munitions
MHE	Materials Handling Equipment
Mhz	Megahertz



MIA	Missing In Action
MIIDS	Military Integrated Intelligence Data System
MILCON	Military Construction Navy
MILES	Multiple Integrated Laser Engagement System
MIO	Maritime Interdiction Operations
MILSTAR	Military Strategic and Tactical Relay
MLA	Medium Lift Alternative
MLRS	Multiple Launch Rocket System
MLS	Marine Load System
MMS	Marine Mammal System
MNS	Mission Needs Statement
MOA	Memorandum of Agreement
MOB	Mobile Offshore Base
MOL	Marine on Line
MOLLE	Modular Lightweight Load Carrying Equipment
MOOTW	Military Operations Other than War
MOPP	Mission Oriented Protective Posture
MORE	Military Operations in a Riverine Environment
MOS	Military Occupational Specialty
MOU	Memorandum of Understanding
MOUT	Military Operations in Urban Terrain
MPF	Maritime Prepositioning Force
MPF(E)	Maritime Prepositioning Force (Enhanced)
MPF(F)	Maritime Prepositioning Force (Future)
MPIM	Multi-Purpose Individual Munition
MPMC	Military Personnel Marine Corps
MPS	Maritime Prepositioning Ships
MPSRON	Maritime Prepositioning Ships Squadron
MRB	MROC Review Board
MROC	Marine Requirements Oversight Council
MRP	Maintenance of Real Property
MRRS	Multi-Role Radar System
MRS	Mobility Requirements Study
MSBL	MAGTF Software Baseline
MSC	Major Subordinate Command
MSC	Military Sealift Command
MSE	Major Subordinate Element
MSG	Marine Security Guard Battalion
MSR	Main Supply Routes
MSTP	MAGTF Staff Training Program
MTACCS	Marine Tactical Command and Control System
MTID	MILES Target Interface Device
MTT	Mobile Training Team
MTVR	Medium Tactical Vehicle Replacement
MTWS	MAGTF Tactical Warfare Simulation
MULE	Modular Universal Laser Equipment



MWS	Modular Weapon System
MWSG	Marine Wing Support Group
MWTS	Medium Weapon Thermal Sight
NAF	Non-Appropriated Funds
NALMEB	Norway Air-Landed MEB
NAPDD	Non-Acquisition Category Program Definition Document
NAS	Naval Air Station
NATO	North Atlantic Treaty Organization
NAVFLIR	Navigation Forward Looking Infrared
NBC	Nuclear, Biological and Chemical
NCO	Noncommissioned Officer
NCS-E(D)	Downsized Enhanced Net Control Station
NDI	Non-Developmental Item
NDP	National Defense Panel
NDSS	Network Data Storage Solution
NEF	Naval Expeditionary Force
NEO	Noncombatant Evacuation Operations
NESEA	Naval Electronics System Engineering Activity
NFCS	Naval Fires Control System
NFIP	National Foreign Intelligence Program
NIMA	National Imagery and Mapping Agency
NIPRNET	Nonsecure Internet Protocol Router Network
NIS	National Input Segment
NITF	National Imagery Transmission Format
NLW	Non-Lethal Weapons
NM	Nautical Miles
NMCB/R	Naval Mobile Construction Battalion/Regiment
N/MCI	Navy/Marine Corps Intranet
NMS	National Military Strategy
NOS	Network Operating System
NRL	Naval Research Lab
NRT	Near Real Time
NSE	Naval Support Equipment/Element
NSF	Navy Stock Fund
NSFS	Naval Surface Fire Support
NTCS-A	Naval Tactical Command System Afloat
NTIS	Night Thermal Imagery System
NTS	Night Targeting System
NVG	Night Vision Goggles
OMCM	Organic Mine Countermeasure
O&MMC	Operation and Maintenance Marine Corps
O&MMCR	Operation and Maintenance Marine Corps Reserve
OCU	Operator Console Upgrade
OEF	Operation Enduring Freedom
OEO	Other Expeditionary Operations
OMFTS	Operational Maneuver from the Sea



ONE	Operation Noble Eagle
ONR	Office of Naval Research
ONW	Operation Northern Watch
OODA	Observe, Orient, Decide, Act
OPEVAL	Operational Evaluation
OPLAN	Operation Plan
OPNAV	Chief of Naval Operations
OPP	Offload Preparation Party
OPSEC	Operational Security
OPTEMPO	Operational Tempo
ORD	Operational Requirements Document
OSD	Office of the Secretary of Defense
OST	Order Ship Time
OSW	Operation Southern Watch
OT&E	Operational Test and Evaluation
OTEIP	Overseas Tour Extension Incentive Program
OTH	Over-the-Horizon
OTV	Outer Tactical Vest
PAA	Primary Aircraft Authorization
PACOM	Pacific Command
PALCON	Pallet Containers
PANMC	Procurement of Ammunition Navy and Marine Corps
PASGT	Personal Armor System Ground Troops
PCS	Permanent Change of Station
PDEA	Power Driven Excavating Arm
PDR	Preliminary Design Review
PDRR	Program Definition and Risk Reduction
PEO	Program Execution Officer
PERSTEMPO	Personnel Tempo
PGM	Precision Guided Munitions
PGS	Precision Gunnery System
PGTS	Precision Gunnery Training System
PIP	Product Improvement Program
PITS	Portable Infantry Target System
PKI	Public Key Infrastructure
PLGSR	Precision Lightweight Global Positioning System Receiver
PLRS	Position Location Reporting System
PM	Program Manager
PMC	Procurement Marine Corps
PME	Professional Military Education
POD	Port of Debarkation
POE	Port of Embarkation
POM	Program Objective Memorandum
POW	Prisoner of War
PPBS	Planning, Programming and Budgeting System



PPV	Public/Private Ventures
PRG	Program Review Group
PSD	Propulsion System Demonstrator
PSYOPS	Psychological Operations
PWRMS	Prepositioned War Reserve Material Stocks
QDR	Quadrennial Defense Review
QOL	Quality of Life
QUADCON	Quadruple Containers
R&D	Research and Development
R2D2	Radio Reconnaissance Distribution Device
R2P2	Rapid Response Planning Process
R3B	Resources and Requirements Review Board
RAC	Riverine Assault Craft
RACWETS	Riverine Assault Craft Weapons Engagement Training System
RAM	Reliability, Availability and Maintainability
RAM-D	Reliability, Availability, Maintainability and Durability
RAM/RS	Reliability, Availability and Maintainability/Rebuild to Standard
RBA	Revolution in Business Affairs
RBE	Remain Behind Equipment
RBU	Rear Body Units
RCT	Repair Cycle Time
R&D	Research & Development
RDK	Rapid Deployment Kitchen
RDT&E	Research Development Test and Evaluation
RETS	Remote Engagement Target System
RF	Radio Frequency
RFP	Request for Proposal
RHC	Ruggedized Handheld Computer
RIS	Range Instrumentation System
RLST	Remote Landing Site Tower
RMA	Revolution in Military Affairs
RMHS	Remote Mine Hunting System
RMP	Reprogrammable Micro Processor
RMS	Remote Mine Hunting System
ROC	Required Operational Capability
ROE	Rules of Engagement
RO/RO	Roll-On/Roll-Off
ROWPU	Reverse Osmosis Water Purification Unit
RPMC	Reserve Personnel Marine Corps
RRC	Rigid Raiding Craft
RREP	Radio Reconnaissance Equipment Program
RRR	Residual Reserve Requirement
RRT	Radio Reconnaissance Teams
RSO&I	Reception, Staging, Onward Movement and Integration



S&T	Science and Technology
SAAWC	Sector Anti-Air Warfare Coordinator
SAAWF	Sector Anti-Air Warfare Facility
SACC	Supporting Arms Coordination Center
SAPI	Small Arms Protective Insert
SAR	Search and Rescue
SATCOM	Satellite Communications
SCI	Special Compartmented Information
SCN	Shipbuilding and Conversion Navy
SDD	System Development and Demonstration
SDE	Shared-Data-Environment
SDS	Sorbent Decontamination System
SCT	Smart Card Technology
SE	Supporting Establishment
SECREP	Secondary Repairables
SEP	Soldier Enhancement Program
SESAMS	Special Effects Small Arms Marking System
SHADE	Shared Data Environment
SHF	Super High Frequency
SHORAD	Short Range Air Defense
SIDS	Secondary Imagery Dissemination System
SIE	Systems Integration Environment
SIGINT	Signals Intelligence
SINCGARS	Single-Channel Ground and Airborne Radio System
SIPRNET	Secret Internet Protocol Router Network
SLEP	Service Life Extension Program
SLOC	Sea Lines of Communication
SLRP	Survey Liaison & Reconnaissance Party
SMART-T	Secure Mobile Anti-Jam Reliable Tactical Terminal
MAW	Shoulder-Launched Multipurpose Assault Weapon
SMCM	Surface Mine Countermeasures
SMCR	Selected Marine Corps Reserve
SMMC	Sergeant Major of the Marine Corps
SNCO	Staff Non-commissioned Officer
SOA	Sustained Operations Ashore
SOC	Special Operations Capable
SOI	School of Infantry
SONET	Synchronization Optical Network
SOUTHCOM	Southern Command
SPACECOM	Space Command
SPAWAR	Space and Naval Warfare Systems Command
SPMAGTF	Special Purpose Marine Air-Ground Task Force
SPMAGTF(X)	Special Purpose MAGTF (Experimental)
SPOD/E	Surface Port Of Debarkation/Embarkation
SRAW	Short Range Antitank Weapon
SRB	Selective Reenlistment Bonus



SRI	Surveillance, Reconnaissance and Intelligence
SRIG	SRI Group
SRR	Strategic and Residual Requirement
SRU	Shop Replacement Units
SSCC	SPAWAR Systems Center Charleston
ST	Science and Technology
STAMIS	Standard Management Information Systems
STAR-T	SHF Tri-Band Advanced Range Extension Terminal
STOM	Ship-to-Objective Maneuver
STOVL	Short Takeoff and Vertical Landing
STRATCOM	Strategic Command
SUBD	Small Unit Biological Detector
SURC	Small Unit Riverine Craft
SWA	Southwest Asia
SWMCM	Shallow Water Mine Countermeasures
SZ	Surf Zone
TAD	Towed Artillery Digitization
TAD	Temporary Additional Duty
T/M/S	Type/Model/Series
TACAIR	Tactical Aviation
TACC	Tactical Air Command Center
TACO	Tactical Communications
TACOM	U.S. Army Tank-Automotive & Armaments Command
TAOC	Tactical Air Operations Center
TAOM	Tactical Air Operations Module
T-AVB	Aviation Logistics Support Ship
TBD	To Be Determined
TBM	Tactical Ballistic Missile
TBMCS	Theater Battle Management Core System
TBMD	Theater Ballistic Missile Defense
TCAC	Technical Control and Analysis Center
TCC	Tactical Communications Center
TCIM	Tactical Communications Interface Module
TCO	Tactical Combat Operations
TCS	Tactical Control Station
TDCP	Tactical Data Communications Processor
TDMA	Time Division Multiple Access
TDN	Tactical Data Network
TDS	Tactical Data System
TECOM	Training and Education Command
TEG	Tactical Exploitation Group
TEMP	Test and Evaluation Master Plan
TEPOP	Training and Education Point of Presence
TERPES	Tactical Electronic Reconnaissance Processing and Evaluation System
TESS	Tactical Engagement Simulation System



TETS	Third Echelon Test Sets
TFDSS	Total Force Decision Support System
THS	Target Handoff Subsystem
TIM	Toxic Industrial Materials
TLAM	Tomahawk Land-Attack Missile
TLDHS	Target Location Designation and Hand-off System
TOA	Total Obligational Authority
TOR	Terms of Reference
TOW	Tube-Launched Optically-Tracked Wire-Guided Missile
TPC	Topographic Production Capability
TPCS	Team Portable Collection System
TPFDD/L	Time Phased Force Deployment Data/List
TQG	Tactical Quiet Generator
TRAM	Tractor Rubber-tired Articulated Steering Multi-purpose
TRANSCOM	Transportation Command
TRAP	Tactical Recovery of Aircraft and Personnel
TRE	Tactical Receive Equipment
TRHS	Tray Ration Heating System
TRI-TAC	Tri-Service Tactical Communications
TSS	Target Sight System
TSOF	Technical Support of Operating Forces
TRSS	Tactical Remote Sensor System
TTP	Tactics, Techniques and Procedures
TUGV	Tactical Unmanned Ground Vehicles
TUV-M	Tactical Unmanned Vehicle-Medium
TWGSS	Tank Weapon Gunnery Simulator System
TWS	Thermal Weapon Sight
TWSEAS	Tactical Warfare Simulation Evaluation & Analysis System
UAV	Unmanned Aerial Vehicle
UB	Unified Build
UCP	Unified Command Plan
UDP	Unit Deployment Program
UGV	Unmanned Ground Vehicle
UHF	Ultra High Frequency
ULCS	Unit Level Circuit Switch
UMCM	Undersea Mine Countermeasures
UNC	United Nations Command (Korea)
UNITAS	An annual U.S. CINCSOUTH sponsored series of exercises in South America
UNMIH	United Nations Mission in Haiti
UNOSOM	United Nations Operations Somalia
UNPROFOR	United Nations Protection Force (Bosnia)
UOC	Unit Operations Center
USCENTCOM	United States Central Command
USEUCOM	United States European Command



USJFC	United States Joint Forces Command
USMC	United States Marine Corps
USPACOM	United States Pacific Command
USSOUTHCOM	United States Southern Command
UUV	Unmanned Underwater Vehicle
VHF	Very High Frequency
VMA	Marine Attack Squadron
VMAQ	Marine Tactical Electronic Warfare Squadron
VMFA	Marine Fighter/Attack Squadron
VMFA(AW)	Marine All-Weather Fighter/Attack Squadron
VMGR	Marine Aerial Refuel and Transport Squadron
VMM	Marine Medium Tiltrotor Squadron
VMMT	Marine Medium Tiltrotor Training Squadron
VMU	Marine Unmanned Aerial Vehicle Squadron
V/STOL	Vertical/Short Takeoff and Landing
VSW	Very Shallow Water
VTOL	Vertical Takeoff and Landing
VVT	Video Teletraining
WAN	Wide Area Network
WHNS	Wartime Host Nation Support
WMD	Weapons of Mass Destruction
WNW	Wideband Networking Waveform
WPN	Weapons Procurement Navy
WRMR	War Reserve Munitions Requirement
WTI	Weapons and Tactics Instructor
WWMCCS	Worldwide Military Command and Control System



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